VOL. 34, n.º 2
JULIO-DICIEMBRE 2025
ISSN 2344-8644 en línea

REVISTA **COLOMBIANA** DE PSICOLOGÍA

Departamento de Psicología · Facultad de Ciencias Humanas

UNIVERSIDAD
NACIONAL
DE COLOMBIA

REVISTA COLOMBIANA DE PSICOLOGÍA
VOL. 34, n.° 2, JULIO-DICIEMBRE 2025
ISSN 2344-8644 EN LÍNEA
www.revistacolombianapsicologia.unal.edu.co

LA REVISTA COLOMBIANA DE PSICOLOGÍA es una publicación semestral del Departamento de Psicología de la Universidad Nacional de Colombia, dirigida a instituciones educativas y culturales, psicólogos, estudiantes de Psicología o disciplinas afines. Publica trabajos arbitrados que sigan alguna de las variedades metodológicas de tipo científico que sean relevantes para la psicología. Las opiniones de los autores son de su propia responsabilidad y no comprometen la posición de la revista.

CONTACTO
Revista Colombiana de Psicología, **Departamento de Psicología,** Facultad de Ciencias Humanas
Universidad Nacional de Colombia, cra. 30 n.º 45-03, edificio 212, oficina 220, Bogotá, D. C., Colombia
A. A. 14490, Código postal: 111321, 111311, teléfono: 316 5000 ext. 16307
E-mail: revpsico_fchbog@unal.edu.co
https://revistas.unal.edu.co/index.php/psicologia

La Revista Colombiana de Psicología está incluida en los siguientes índices y bases bibliográficos:

EBSCO
Fuente Académica Premier
(http://www.ebscohost.com/)

SCOPUS
(http://www.info.sciverse.com/scopus)

BVPSI-CO
Biblioteca Virtual de Psicología
(http://www.bvs-psi.org.co/)

CLASE
Citas Latinoamericanas en Ciencias Sociales y Humanidades
(http://132.248.9.1:8991/F/MQLBLJPQ2PS9AQ5MULE9V9ANN66DILI984UTD1QNE8QDRQV13T-01793?func=find-b-0&local_base=cla01)

DIALNET
Universidad de la Rioja
(http://dialnet.unirioja.es/)

DOAJ
Directory of Open Access Journals
(http://www.doaj.org/)

LATINDEX
Sistema regional de información en línea para revistas científicas de América Latina, el Caribe, España y Portugal.
(http://www.latindex.unam.mx/)

LILACS
Literatura Latinoamericana y del Caribe en Ciencias de la Salud
(http://lilacs.bvsalud.org/es/)

PSICODOC
Base de datos bibliográfica de Psicología
(http://www.psicodoc.org/acerca.htm)

PUBLINDEX
Sistema Nacional de Indexación de Publicaciones Especializadas de Ciencia, Tecnología e Innovación, CT+I
(http://201.234.78.173:8084/publindex/)

REDALYC
Red de Revistas Científicas de América Latina y el Caribe, España y Portugal
(http://redalyc.uaemex.mx/#)

SCIELO
Scientific Electronic Library Online
(http://www.scielo.org.co/)

REDIB
REDIB (Red Iberoamericana de Innovación y Conocimiento Científico) es una plataforma de agregación de contenidos científicos y académicos en formato electrónico producidos en el ámbito iberoamericano.

PSYCINFO
Base de datos de la American Psychological Association
(http://www.apa.org/pubs/databases/psycinfo/coverage.aspx)

DISTRIBUCIÓN

Edificio de Posgrados de Ciencias Humanas Rogelio Salmona (225), primer piso
Tel.: 316 5000, ext. 16139

PREPARACIÓN EDITORIAL

CENTRO EDITORIAL
FACULTAD DE CIENCIAS HUMANAS

Jineth Ardila Ariza
Directora del Centro Editorial

Julián D. Morales
Coordinador editorial de revistas

Michael Cárdenas Ramírez
Coordinador gráfico

Alejandra Tashko
Diagramadora

Laura Andrea Camacho Gómez
Correctora de textos en inglés

Laura Andrea Camacho Gómez
Editora de mesa

Ciudad Universitaria, ed. 225, sótano
Tel. 316 5000 ext. 16139
editorial_fch@unal.edu.co
www.humanas.unal.edu.co
Bogotá, D. C., 2025

REVISTA COLOMBIANA DE PSICOLOGÍA
VOL. 34, n.º 2 JULIO-DICIEMBRE 2025
ISSN 2344-8644 EN LÍNEA

Contenido

9 Nota Editorial

13-21 Discriminating the Histrionic Personality Disorder Through the Recognition Need Factor From the Dimensional Clinical Personality Inventory 2

LUCAS DE FRANCISCO CARVALHO
Universidade São Francisco
ANDRÉ PEREIRA GONÇALVES
Universidade São Francisco
GISELLE PIANOWSKI
Universidade São Francisco
ANA CAROLINA ZUANAZZI
Universidade São Francisco
GABRIEL CARVALHO FRANCO
Universidade São Francisco

23-37 Loneliness in Urban Mapuche Older Adults in Chile: Ethnic Identity Affirmation, Autonomy, and Subjective Well-Being as predictors

JOAN CASAS-MARTÍ
Universitat de Barcelona
ABEL SOTO-HIGUERA
Universidad de La Frontera
LEONOR RIQUELME-SEGURA
Universidad de La Frontera
FELIPE QUINTANO-MÉNDEZ
Universidad de La Frontera, Universidad Santo Tomás
CECILIA MAYORGA-MUÑOZ
Universidad de La Frontera

39-58 Explaining Commuter Transport Choice During the COVID-19 Pandemic: A Study Based on the Theory of Planned Behavior

EDUARDA LEHMANN BANNACH
Université Paris Cité, Univ Gustave Eiffel
ALESSANDRA BIANCHI
Universidade Federal do Paraná

SAMIRA BOURGEOIS-BOUGRINE
Université Paris Cité, Univ Gustave Eiffel
PATRICIA DELHOMME
Univ Gustave Eiffel, Université Paris Cité

59-77 A Systematic Review of Randomized Controlled Trials for Behavioral Interventions Targeting Alcohol and Cannabis Use in Young Adults

ANGELA J PEREIRA-MORALES
Doctorado en Salud Pública, Facultad de Medicina, Universidad Nacional de Colombia
MARÍA FERNANDA REDONDO MAYORGA
Facultad de Ciencias Humanas, Universidad Nacional de Colombia
FELIPE RAMÍREZ-CORTÁZAR
Facultad de Ciencias Humanas, Universidad Nacional de Colombia, Universidad de Cundinamarca
JAVIER HERNANDO ESLAVA-SCHMALBACH
Facultad de Medicina, Universidad Nacional de Colombia

79-97 Language Development as a Mediator Between Child Maltreatment and Internalizing and Externalizing Behavior in Colombian Children and Adolescents

ANGÉLICA MARÍA GALÁN ARIAS
Universidad Nacional de Colombia
PABLO MUÑOZ SPECHT
Universidad Nacional de Colombia
ANA VIOLETA GRANADOS ROA
Universidad Externado de Colombia
JUAN CARLOS CAICEDO MERA
Facultad de Ciencias Sociales y Humanas. Universidad Externado de Colombia.
JORGE MARTÍNEZ COTRINA
Facultad de Ciencias Sociales y Humanas. Centro de Investigaciones sobre Dinámica Social (CIDS) Universidad Externado de Colombia
DIEGO MAURICIO APONTE CANENCIO
Facultad de Ciencias Sociales y Humanas. Centro de Investigaciones sobre Dinámica Social (CIDS) Universidad Externado de Colombia

99-113 Comparison in Socioemotional Development in Chilean and the U.S. Children

NANCY ESPINOSA DÍAZ
Universidad Católica del Maule
CHAMARRITA FARKAS
Pontificia Universidad Católica de Chile
CLAIRE VALLOTTON
Michigan State University, USA

CLAUDIO ROJAS-JARA
Universidad Católica del Maule, Chile

115-126 **Explanatory Model of Intrinsic Motivation in University Students**

NANCY LIZETH RAMÍREZ-RONCANCIO
Universidad Pedagógica y Tecnológica de Colombia
MARTHA CECILIA JIMÉNEZ-MARTÍNEZ
Universidad Pedagógica y Tecnológica de Colombia
YEIMY TATIANA ALBARRACÍN-CHAPARRO
Universidad Pedagógica y Tecnológica de Colombia
DIANA CAROLINA LATORRE-VELÁSQUEZ
Universidad Pedagógica y Tecnológica de Colombia
DANIEL GONZÁLEZ LOMELÍ
University of Sonora: Hermosillo

127-138 **Work-related Stress, Secondary Traumatic Stress, Hardiness and Post-Traumatic Growth Among ICU Healthcare Workers in the Post-Pandemic Era**

MAYDA PORTELA
Universidad Católica de Uruguay

Sección monográfica

139-165 **Prácticas culturales de cuidado de la salud mental y su relación con la construcción de paz en los Montes de María, Colombia**

DENNYS GARCÍA-PADILLA
Pontificia Universidad Javeriana
MARÍA-JULIANA REYES-RIVERA
Pontificia Universidad Javeriana
DIANA CAROLINA RUBIO-LEÓN
Pontificia Universidad Javeriana
PABLO ABITBOL
Universidad Tecnológica de Bolívar
LAURA CANO-SIERRA
Pontificia Universidad Javeriana
WILSON LÓPEZ-LÓPEZ
Pontificia Universidad Javeriana
HUSEYIN CAKAL
Keele University
CLAUDIA PATRICIA PINEDA-MARIN
Fundación Universitaria Konrad Lorenz; Keele University

Editorial

Durante la última década, la Revista Colombiana de Psicología ha realizado una serie de esfuerzos para dirigir la investigación psicológica hacia temas de relevancia global que se inspiren en temas, necesidades y oportunidades presentes en el contexto local. Esto se ha realizado a través de la invitación a sesiones y grupos monográficos dedicados a la toma de decisiones, la psicología de la paz, y el estudio psicológico de la desigualdad. Aunque estos esfuerzos han logrado atraer artículos interesantes en cada una de estas áreas, ellos han sido infructuosos a la hora de modificar la agenda general de la psicología colombiana y latinoamericana. La gran mayoría de la investigación realizada por los psicólogos colombianos sigue enfocada en modelos y temas de poca actualidad académica, de ahí nuestras bajas tasas de publicación internacional. Paradójicamente, la investigación tampoco se enfoca en temas donde el contexto local presente ventajas para desarrollar una agenda, lo que va desde modelos animales locales, pasando por las características psicológicas derivadas de nuestra diversidad cultural, hasta la solución a problemas sociales de nuestros contextos.

Hace poco nos visitó un investigador internacional —cuyo nombre no voy a mencionar—, quien ha trabajado en universidades de primer nivel en el mundo. Por cortesía, lo invité a un encuentro de investigadores. Su primer comentario fue: "No entiendo por qué hacen esto. Es poco actual, ataca preguntas que no son centrales y no aprovechan las ventajas y preguntas del contexto local". Creo que su comentario señala una preocupación central en la visión del equipo de la Revista Colombiana de Psicología: la resistencia de nuestras comunidades de investigación a buscar temas y metodologías actuales y centrales al trabajo en las universidades del mundo, y a encontrar preguntas que puedan ser respondidas en nuestros contextos con ventajas competitivas. Internet existe y todo se puede buscar entrando a los sitios web de las universidades internacionales, y el contexto local está ahí: solo hay que saber mirar.

Javier Alejandro Corredor Aristizábal
Director de la Revista Colombiana de Psicología
Universidad Nacional de Colombia, Bogotá, Colombia

Artículos

doi: https://doi.org/10.15446/rcp.v34n2.103427

Discriminating the Histrionic Personality Disorder Through the Recognition Need Factor From the Dimensional Clinical Personality Inventory 2

LUCAS DE FRANCISCO CARVALHO
Universidade São Francisco

ANDRÉ PEREIRA GONÇALVES
Universidade São Francisco

GISELLE PIANOWSKI
Universidade São Francisco

ANA CAROLINA ZUANAZZI
Universidade São Francisco

GABRIEL CARVALHO FRANCO
Universidade São Francisco

How to cite this article: Carvalho, L. de F., Gonçalves, A. P., Pianowski, G., Zuanazzi, A. C. & Carvalho Franco, G. (2025). Discriminating the Histrionic Personality Disorder Through the Recognition Need Factor From the Dimensional Clinical Personality Inventory 2. *Revista Colombiana de Psicología*, *34*(2), 13-21. https://doi.org/10.15446/rcp.v34n2.103427

Correspondence: Lucas de Francisco Carvalho (https://orcid.org/0000-0002-3274-9724). Email: lucas@labape.com.br

SCIENTIFIC RESEARCH ARTICLE

RECEIVED: JUNE 30TH, 2022 - ACCEPTED: NOVEMBER 30TH, 2022

Discriminating the Histrionic Personality Disorder Through the Recognition Need Factor From the Dimensional Clinical Personality Inventory 2

Abstract

Investigating discriminative capacity is crucial to determining a measure's usability and establishing a clinically useful cutoff for decision-making. This study aimed to examine the Dimensional Clinical Personality Inventory-2 (IDCP-2) factors' capacity to identify individuals according to the presence of an HPD diagnosis. We selected 339 individuals from a dataset comprising 4,854 adults, reaching a statistical power of .98. We administered five HPD-related factors from the IDCP-2. Most IDCP-2 factors could identify individuals based on HPD pathological traits, as those diagnosed with HPD had the highest mean scores in the factors, except for the Interpersonal Superficiality factor. Intergroup comparisons and regression analysis indicated that the Need for Recognition factor was the most discriminating indicator of HPD pathological traits. We provide a cutoff to be clinically employed professionals for HPD screening.

Keywords: Cluster B, externalizing disorders, self-report, pathological traits.

Discriminación del Trastorno Histriónico de la Personalidad a Través del Factor de Necesidad de Reconocimiento del Inventario Clínico Dimensional de Personalidad 2

Resumen

Investigar la capacidad discriminatoria es crucial para determinar la usabilidad de una medida y establecer un límite clínicamente útil para la toma de decisiones. Este estudio tuvo como objetivo examinar la capacidad de los factores del Inventario Clínico Dimensional de Personalidad 2 (IDCP-2) para identificar a las personas según la presencia del diagnóstico de HPD. Seleccionamos 339 individuos de un conjunto de datos compuesto por 4.854 adultos, alcanzando una potencia estadística de .98. Administramos cinco factores relacionados con HPD del IDCP-2. La mayoría de los factores IDCP-2 pudieron identificar a las personas en función de los rasgos patológicos de HPD, ya que las personas diagnosticadas con HPD tenían las medias más altas en los factores. La excepción a esto fue el factor de Superficialidad Interpersonal. Las comparaciones intergrupales y el análisis de regresión indicaron el factor Necesidad de reconocimiento como el indicador más discriminatorio de la presencia de rasgos patológicos de HPD. Ofrecemos un límite que puede ser empleado clínicamente por profesionales para detectar la presencia de HPD.

Palabras clave: Grupo B; trastornos de externalización; autoinforme; rasgos patológicos.

Introduction

Histrionic Personality Disorder (HPD) has gone through different terminologies and descriptive changes throughout past editions of the DSM. These changes primarily stem from the need to specify diagnostic criteria and differentiate HPD from other personality disorders, such as narcissistic and borderline (Bakkevig & Karterud, 2010; Novais et al., 2015). HPD is classified within the externalizing antagonist spectrum alongside paranoid, narcissistic, and borderline personality disorders in modern taxonomic models (Kotov et al., 2017, 2018). However, some proposals group HPD with other personality disorders, such as antisocial and narcissistic, according to DSM-5 Sections II and III (Anderson et al., 2014). The proximity among these disorders creates a demand to clearly and objectively establish the composition of the HPD.

The prevalence of HPD in the general population is estimated at 1.8% (APA, 2013). However, some studies report varying prevalence rates, such as 0.4% in a Norwegian sample (Bakkevig & Karterud, 2010). We conducted our investigation with a sample from Brazil, where only one study has examined the prevalence of personality disorders, reporting a 6.8% rate for any personality disorder exclusively in São Paulo (Santana et al., 2018). This figure may not reflect national rates. The study did not report prevalence rates for individual personality disorders; however, it found a 2.7% prevalence for Cluster B disorders, encompassing antisocial, borderline, histrionic, and narcissistic personality disorders. HPD's diagnostic criteria demonstrate relatively high comorbidity with narcissistic, borderline, and dependent disorders (Bakkevig & Karterud, 2010). The high comorbidity is mainly due to the commonality between diagnostic criteria, such as the need to be the center of attention, seductive behavior, and emotional lability. These traits are also typical of narcissistic personality disorder (Anderson et al., 2014; Kotov et al., 2017; Samuel et al., 2012). Although HPD has a lower prevalence than other disorders, its negative impact is evident in the personal and social difficulties faced by affected individuals (Bockian, 2006; Demopulos et al., 1996; Disney et al., 2012).

HPD profoundly affects individuals, leading to unstable and superficial relationships, emotional volatility, and a distorted self-image, which often drives impulsive and risky behaviors (APA, 2013; Ferguson & Negi, 2014; Furnham, 2014; Novais et al., 2015). These personal challenges may hinder their ability to maintain stable employment and meaningful social connections and pose broader public health concerns. The constant need for attention and approval can strain mental health resources, as individuals with HPD frequently seek therapy or medical attention for emotional distress. Additionally, their erratic behaviors contribute to public health burdens, underscoring the need for targeted mental health interventions and support systems.

The DSM-5 (APA, 2013) identifies HPD as a pattern of emotionality and excessive attention-seeking. It begins in adulthood, and at least five out of eight criteria must be present for the diagnosis. Diagnostic criteria are discomfort when not in the spotlight, inappropriate or provocative sexually seductive behavior, rapid changes and superficial expression of emotions, use of physical appearance to attract attention, overly impressionistic and lacking in detail, theatricality and exaggerated expression of feelings, excessively suggestible, and evaluation of personal relationships as more intimate than they are.

While the categorical model dominates diagnostic approaches, contemporary dimensional models conceptualize HPD as a pathological profile composed of a set of maladaptive traits. Although everyone exhibits these traits to some extent, only a few individuals demonstrate them high enough to be considered pathological (section III from APA, 2013; Kotov et al., 2017). According to empirical evidence from studies based on the dimensional perspective, typical traits of HPD are attention-seeking, manipulation, impulsivity, and

emotional lability (Anderson et al., 2014; Hopwood et al., 2012; Morey et al., 2016; Samuel et al., 2012).

Although a single pathological trait does not characterize the disorder, empirical evidence indicates attention-seeking as the pathological trait most discriminative for the presence of HPD. For instance, Anderson et al. (2014) demonstrated that this trait uniquely contributes to HPD prediction. Similarly, attention-seeking is a key differentiator between HPD and narcissistic personality disorder (Carvalho et al., 2019; Sacvi, Turan, Griffiths, & Ercengiz, 2019). Moreover, the most robust association between attention-seeking and HPD was observed compared to other pathological traits (Morey et al., 2016; Krueger et al., 2014; Hopwood et al., 2012).

Promising indicators for HPD diagnosis typically relate to attention-seeking traits. However, the number of studies focusing on assessment tools to measure HPD traits is restricted. For instance, Schotte et al. (1993) examined the Minnesota Multiphasic Personality Inventory (MMPI) and reported good area under the curve (AUC) values for three scales: Hypomania (AUC = .70), Social Introversion (AUC = .70), and Histrionic (AUC = .74)). Associations between HPD and the Rorschach test (Klopfer System) were also observed by Blais and Hilsenroth (1998). They found specific indicators (e.g., sum of responses, texture) linked to HPD diagnostic criteria. A similar approach by Furnham (2014) investigated associations between HPD and the NEO-PI-R. Findings indicated extroversion and openness correlated to the HPD pathological traits, specifically Impulsivity and Angry hostilityfacets. Furthermore, a self-report scale specifically designed to assess HPD symptoms (Ferguson & Negy, 2014). Although this measure presented good reliability and internal structure validity, clinical validity was not investigated.

Our study was conducted in Brazil, a middle-income country where assessment tools for HPD are even scarcer than those available internationally. Researchers developed the Dimensional Clinical Personality Inventory-2 (IDCP-2; Carvalho & Pianowski, in press). The IDCP-2 comprises 12 dimensions (dependency, aggressiveness, mood instability, eccentricity, need for attention, distrust, grandiosity, isolation, criticism avoidance, self-sacrifice, conscientiousness, and inconsequence) and respective 47 factors.

This study aimed to evaluate the capacity of IDCP-2 factors related to the attention-seeking trait to discriminate people according to the presence of HPD diagnosis. Focusing on the attention-seeking trait and following previous findings (Abela et al., 2015; Carvalho & Primi, 2015, 2016), we indicated five IDCP-2 factors have the potential to discriminate people with HPD diagnosis: Seduction and manipulation, Emotional intensity, Interpersonal superficiality, Attention-seeking, and Need for recognition. Although we expected the five factors to be discriminative of HPD presence, according to the literature (Anderson et al., 2014; Morey et al., 2016; Krueger et al., 2014; Hopwood et al., 2012), the Need for attention factor should present higher discriminative power compared to the other factors.

Methods

Participants

Participants included 4,854 individuals. A subset of 339 participants was selected based on the groups established for the study and statistical power considerations. This sample size achieved a statistical power of .98 (when effect size $d \geq .20$, $p \leq .05$). Participants were divided into four groups.

The first group (community) consisted of 196 individuals from the general population who reported no history of psychological or psychiatric treatment. Their ages ranged from 19 to 49 years ($M = 23.27$, $SD = 4.79$); 95% were college students, and 50% were men.

The second group (mental health) comprised 38 individuals from the general population who reported receiving psychological or psychiatric treatment. Their ages ranged from 18 to 90 years

(M = 30.60, SD = 16.02); 63.2% were college students, and 76.3% were women.

The third group (PD) was composed of 91 individuals diagnosed with personality disorders other than HPD. Their ages ranged from 19 to 73 years (M = 39.83, SD = 12.66); approximately 80% had completed high school, and 75.8% were women.

The fourth group (HPD) consisted of 14 individuals diagnosed with HPD. Their ages ranged from 21 to 62 years (M = 43.71, SD = 11.66); 80.5% had completed high school, and 92.9% were women.

Outpatients in the PD and HPD groups were diagnosed by psychiatrists at a psychiatric outpatient clinic affiliated with a public university in the State of São Paulo. Diagnoses were based on clinical observations and the Structured Clinical Interview for DSM Axis II (SCID-II).

Measure

Dimensional Clinical Personality Inventory 2 (IDCP-2; Carvalho & Primi, in press)

The IDCP-2 is a self-report scale designed to assess pathological traits. It comprises 210 items rated on a 4-point Likert scale. The IDCP-2 includes 12 dimensions subdivided into 47 factors. Focusing on the attention-seeking trait of HPD, we selected the following factors:

- **Seduction and Manipulation** (manipulative behavior often using seduction; 3 items)
- **Emotional Intensity** (belief in experiencing emotions more intensely than others; 3 items)
- **Interpersonal Superficiality** (belief in the ability to establish bonds quickly; 3 items)
- **Attention-Seeking** (exaggerated need to be the center of attention; 4 items)
- **Need for Recognition** (desire to be recognized for one's qualities; 4 items)

Previous studies have demonstrated good psychometric properties for these factors (Abela et al., 2015; Carvalho & Primi, 2016). Internal consistency estimate was verified by employing alpha that varied between .72 (Emotional intensity) and .87 (Interpersonal superficiality), and omega that ranged from .72 to .88 for the same factors.

Procedure

This study was approved by a Brazilian Research Ethics Committee. All participants provided informed consent before participation. The informed consent form included researchers' contact information for participants interested in receiving psychological care.

Participants in the community and mental health groups were recruited via Google Forms. Data for the PD and HPD groups were collected at a psychiatric clinic linked to a public university in the State of São Paulo.

Statistical Analysis

Some participants did not answer all IDCP-2 items employed in this study. We applied the equating procedure from a dataset of 4,854 individuals, allowing for the estimation of scores across all dimensions and factors (Thomas, 2011; Wyse & Reckase, 2011). As a result of this procedure, we are presenting the scores on the theta scale.

From this dataset, we selected individuals from the outpatient groups (HPD = 14; PD = 91), individuals from the community who reported a psychiatric disorder diagnosis (mental health = 38), and a community sample without a psychiatric history (community = 196).

Data were analyzed using bootstrapped (k = 1,000) repeated-measures ANOVA to compare pathological trait profiles between groups. The effect size was the Np^2, interpreted according to Cohen et al. (2001): ηp2 = small (.01 to .05); moderate (.06 to .13); big (≥.14). We also computed ANOVA post hoc tests (Tukey) and planned contrast ANOVA. For contrast ANOVA, groups were weighted according to severity level (i.e., community < mental health < PD < HPD) as follows: -2 (community sample), -1 (mental health), 1 (PD), and 2 (HPD). As a measure of the effect size,

we calculated the r effect size (r-ES), as follows: r-ES = SqRt(tˆ2/(FBG(dfBG) + dfWG)). We also computed Cohen's d to measure differences between the HPD group and the other three groups'. As previously recommended, regression analyses complemented group comparisons (Davis, 2010). The dependent variable included the four groups in a linear regression analysis, while independent variables comprised IDCP-2 factors and demographic variables (sex, age, and educational level). The enter method was used for regression analysis. The significance level was set at $p \leq .05$.

To determine the optimal cutoff for factors showing significant differences when comparing the group diagnosed with HPD and the community group. We conducted a ROC curve and generated indicators for sensitivity and specificity. We performed the analysis using SPSS 21.

Results

Table 1 presents the results of the group comparison and regression analysis.

The highest means were obtained by the HPD group, except for the Interpersonal Superficiality factor. The repeated measures ANOVA indicated differences in all factors except for the Emotional Intensity factor. However, in the post hoc analysis, only the Need for Recognition factor presented significant differences between the HPD and community groups. The Interpersonal Superficiality factor was able to differentiate the HPD and PD groups. Contrast ANOVA indicated the highest scores for the HPD group, with effect sizes ranging from small to large (ηp2 = .02 to .16).

Linear regression analysis, which included IDCP-2 factors as well as sex, age, and educational level, explained 47% of the group variance.

Table 1.
Group comparison and prediction through the IDCP-2 factors

Factors	Groups	M	95%CI M_{lower}	95%IC M_{upper}	SD	F (df)	p (η_p^2) $d^1d^2d^3$	$p_{contrast}$ (r_{es})	β_{linear} SE
Seduction and Manipulation	Community	-.88	-1.20	-.57	2.22	5.56 (3)	.001 (.05) .08 .11 .59	.61 (.02)	-.06 (.03)
	Mental health	-.95	-1.78	-.12	2.43				
	Other-PD	-2.00	-2.38	-1.53	2.12				
	HPD	-.68	-2.00	.74	2.65				
Emotional Intensity	Community	-.97	-1.26	-.66	1.95	1.53 (3)	.21 (.01) .58 .40 .39	.15 (.10)	.001 (.02)
	Mental health	-.65	-1.32	.06	2.13				
	Other-PD	-.71	-1.20	-.26	2.34				
	HPD	.15	-.82	1.05	1.72				
Attention-seeking	Community	-.54	-.74	-.33	1.48	2.94 (3)	.03 (.02) .28 .25 .58	.92 (.05)	.001 (.04)
	Mental health	-.54	-1.06	.002	1.69				
	Other-PD	-1.04	-1.37	-.71	1.59				
	HPD	-.12	-.90	.74	1.64				
Interpersonal superficiality	Community	-1.89	-2.30	-1.46	2.80	4.70 (3)	.003 (.04) .04 .29 .32	.17 (.07)	-.04 (.02)
	Mental health	-1.06	-2.14	.14	3.47				
	Other-PD	-3.02	-3.67	-2.36	3.22				
	HPD	-2.01	-3.36	-.53	2.72				

Need for Recognition	Community	-1.72	-2.01	-1.40	2.08	4.25 (3)	.006 (.04) .69 .36 .26	.004 (.16)	.09* (.02)
	Mental health	-1.11	-1.84	-.28	2.46				
	Other-PD	-.91	-1.41	-.40	2.41				
	hpd	-.30	-1.04	.43	1.49				

Note. F (DF) = F and degrees of freedom of ANOVA by repeated measures; p (ηp2) = significance and effect of ANOVA by contrast; $p_{contrast}$ (r_{es}) = effect and significance of ANOVA by contrast; β_{linear} (SE) = betas and standard errors of linear regression. The groups that differed significantly in the Post Hoc were highlighted in gray. d^1 = Cohen's d for HPD and community groups comparison; d^2 = Cohen's d for HPD and mental health groups comparison; d^3 = Cohen's d for HPD and PD groups comparison; * = p < .05 in regression analysis.

The Need for Recognition factor was the only factor with a significant single contribution. This factor demonstrated the greatest capacity to discriminate between groups, particularly between the HPD and community groups. Considering a cutoff > -.87 (equivalent to a raw score equal to eight), the Recognition need factor presented AUC equal to .72, sensitivity equal to .71, and specificity equal to .65 to differentiate the HPD group from the community group.

Discussion

Investigating discriminative capacity is crucial for determining a measure's usability and establishing a clinically useful cutoff for decision-making. HPD is characterized by pathological traits such as attention-seeking, manipulation, emotional lability, and a strong desire to be the center of attention, which is one of the most defining characteristics of individuals with this diagnosis (Anderson et al., 2014; Hopwood et al., 2012; Krueger et al., 2014; Morey et al., 2016). This study aimed to assess the ability of specific IDCP-2 factors to discriminate people according to the presence of an HPD diagnosis. Based on previous evidence (Abela et al., 2015; Carvalho & Primi, 2015, 2016), we administered five IDCP-2 factors with the potential to discriminate people high in HPD traits. We expected the best performance to be presented by the Need for attention factor. However, our findings indicated otherwise.

Most IDCP-2 factors could identify individuals based on the HPD pathological traits, as individuals diagnosed with HPD exhibited the highest mean scores on these factors. These results align with previous literature indicating which pathological traits are more representative of the presence of HPD (Anderson et al., 2014; Morey et al., 2016; Krueger et al., 2014; Hopwood et al., 2012). The exception to this was the Interpersonal Superficiality factor. Our findings suggested that people without HPD indicators had the highest scores on this factor. The Interpersonal Superficiality factor assesses beliefs about quickly and easily establishing intimate interpersonal bonds (Carvalho et al., 2014). One possible explanation for these findings is that the items measuring this factor may represent socially acceptable behaviors, making them more characteristic of the general population rather than a distinguishing trait of HPD. Similarly, the Emotional Intensity factor did not differentiate the groups. This factor assesses how much the person believes to have more extreme feelings than others and how much the person needs to demonstrate feelings to others (Carvalho et al., 2014). The findings suggest a need to review the items included in this factor.

Intergroup comparisons and regression analyses identified the Need for Recognition factor as the strongest indicator of HPD pathological traits. This factor assesses both the need to be the center of attention and the desire for external validation (Carvalho et al., 2016). Possibly, this was the most discriminating factor because it assesses at the same time two components relevant to the HPD (APA, 2013), the need to be the focus of others and the need to be recognized. This finding explains why the Need for Attention factor demonstrated a lower capacity than this factor, as it measures specifically the need to be in the spotlight (Carvalho et al., 2014). These findings confirm that characteristics

focused on the expectations of others are the most relevant for HPD (Anderson et al., 2014).

We suggest a cutoff equal to eight for administering the IDCP-2 Recognition Need factor for clinical screening purposes of HPD presence. Using this factor would correctly identified 70% of HPD cases and 65% of non-HPD cases. These sensitivity and specificity indicators are considered acceptable for screening tools (Morse & Pilkonis, 2007).

Our study has several methodological limitations that must be weighed when examining our findings. First, the low number of participants diagnosed with personality disorders limits the inferences made based on these results. Second, we did not administer measures other than IDCP-2, which did not allow a direct comparison of the results in the same sample. Furthermore, other pathological traits characterizing HPD, such as impulsivity, were not assessed in this study.

Our preliminary findings suggest that the IDCP-2 factors tested are potentially valid for identifying individuals with HPD traits. Interpersonal Superficiality and Need for Recognition demonstrated the most robust performance among these factors. Specifically, the IDCP-2 Recognition Need factor showed good sensitivity and specificity for initial screenings indicative of possible HPD presence. Despite these promising results, we recommend using all five factors included in our study to provide a comprehensive patient profile. It is important to note that sensitivity and specificity values were derived from a sample consisting of HPD-diagnosed individuals and members of the general population, excluding individuals with other personality disorders (PD). Although the effect sizes were substantial, further research should replicate these findings using larger samples that include individuals diagnosed with other PDs.

References

Abela, R. K., Carvalho, L. D. F., Cho, S. J. M., & Yazigi, L. (2015). Validity Evidences for the Dimensional Clinical Personality Inventory in Outpatient Psychiatric Sample. *Paidéia (Ribeirão Preto)*, *25*(61), 221–228. doi:https://doi.org/10.1590/1982-43272561201510

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders.* Author.

Anderson, J., Snider, S., Sellbom, M., Krueger, R., & Hopwood, C. J. (2014). A comparison of the DSM-5 Section II and Section III personality disorder structures. *Psychiatry Research*, *216*(3), 363–372. http://dx.doi.org/10.1016/j.psychres.2014.01.007

Bakkevig, J. F., & Karterud, S. (2010). Is the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, histrionic personality disorder category a valid construct? *Comprehensive Psychiatry*, *51*(5), 462–470. https://doi.org/10.1016/j.comppsych.2009.11.009

Blais, M. A., & Hilsenroth, M. J. (1998). Rorschach Correlates of the DSM-IV Histrionic Personality Disorder. *Journal of Personality Assessment, 70*(2), 355–364. doi:10.1207/s15327752jpa7002_12

Bockian, N. R. (2006). Depression in histrionic personality disorder. *Personality-guided therapy for depression* (pp. 169–186). American Psychological Association.

Carvalho, L. F., & Primi, R. (2015). Development and internal structure investigation of the Dimensional Clinical Personality Inventory. *Psicologia: Reflexão* e Crítica, *28*(2), 322–330. doi: 10.1590/1678-7153.201528212

Carvalho, L. F., & Primi, R. (2016). Prototype matching of personality disorders with the Dimensional Clinical Personality Inventory. *Psicologia: Teoria e Pesquisa*, *32*(2). doi: 10.1590/0102-3772e322214

Carvalho, L. F., & Primi, R. *Manual técnico do Inventário Dimensional Clínico da Personalidade-2 (IDCP-2)* [Technical Manual of the Dimensional Clinical Inventory of Personality-2 (IDCP-2)]. Pearson.

Carvalho, L. F., Sette, C. P., Capitão, C. G., & Primi, R. (2014). Propriedades psicométricas da versão revisada da dimensão Necessidade de Atenção do Inventário Dimensional Clínico da Personalidade. *Temas em Psicologia*, *22*(1), 147–160. doi: 10.9788/tp2014.1-12

Carvalho, L. F., Sette, C. P., & Ferrari, B. L. (2016). Revision of the grandiosity dimension of the Dimensional

Clinical Personality Inventory and verification of its psychometric properties. *Trends in Psychiatry and Psychotherapy*, *38*(3), 147–155. https://doi.org/10.1590/2237-6089-2015-0040

Carvalho, L. F., Sette, C., Bacciotti, J. T., Pianowski, G., & Marino, C. (2019). Narcissistic and histrionic pathological traits association with passive data from Facebook profile. *Journal of Technology in Behavioral Science*, *4*(61), 274–284. doi:10.1007/s41347-019-00090-1

Cohen, J., Miles, J., & Shevlin, M. (2001). *Applying regression and correlation: A guide for students and researchers.* Sage.

Demopulos, C., Fava, M., McLean, N. E., Nierenberg, A. A., & Rosenbaum, J. F. (1996). Hypochondriacal concerns in depressed outpatients. *Psychosomatic Medicine*, *58*(4), 314–320. https://doi.org/10.1097/00006842-199607000-00003

Disney, K. L., Weinstein, Y., & Oltmanns, T. F. (2012). Personality disorder symptoms are differentially related to divorce frequency. *Journal of Family Psychology*, *26*(6), 959–965. http://dx.doi.org/10.1037/a0030446

Ferguson, C. J., & Negy, C. (2014). Development of a brief screening questionnaire for histrionic personality symptoms. *Personality and Individual Differences*, *66*, 124–127. http://dx.doi.org/10.1016/j.paid.2014.02.029

Furnham, A. (2014). A Bright Side, facet analysis of Histrionic Personality Disorder: The relationship between the HDS Colourful factor and the NEO-PI-R facets in a large adult sample. *The Journal of Social Psychology*, *154*(6), 527–536. doi.org/10.1080/00224545.2014.953026

Hopwood, C. J., Thomas, K. M., Markon, K., Wright, A. G. C., & Krueger, R. F. (2012). DSM-5 personality traits and DSM-IV personality disorders. *Journal of Abnormal Psychology*, *121*(2), 424–432. doi:10.1037/a0026656

Kotov, R., Krueger, R. F., Watson, D., Achenbach, T. M., Althoff, R. R., Bagby, R. M., Brown, T. A., Carpenter, W. T., Caspi, A., Clark, L. A., Eaton, N. R., Forbes, M. K., Forbush, K. T., Goldberg, D., Hasin, D., Hyman, S. E., Ivanova, M. Y., Lynam, D. R., Markon, K., Wright, A. G. C. (2017). The Hierarchical Taxonomy of Psychopathology (HiTOP): A Dimensional Alternative to Traditional Nosologies. *Journal of Abnormal Psychology*, *126*(4), 454–477. http://dx.doi.org/10.1037/abn0000258

Kotov, R., Krueger, R. F., & Watson, D. (2018). A paradigm shift in psychiatric classifi cation: The Hierarchical Taxonomy of Psychopathology (HiTOP). *World Psychiatry*, *17*(1), 24–25. doi: 10.1002/wps.20478

Morey, L. C., Benson, K. T., & Skodol, A. E. (2016). Relating DSM-5 section III personality traits to section II personality disorder diagnoses. *Psychological Medicine*, *46*(3), 647–655. doi.org/10.1017/S0033291715002226

Morse, J. Q., & Pilkonis, P. A. (2007). Screening for personality disorders. *Journal of Personality Disorders, 21*(2), 179–198. doi.org/10.1521/pedi.2007.21.2.179

Novais, F., Araújo, A., & Godinho, P. (2015). Historical roots of histrionic personality disorder. *Frontiers in Psychology, 6,* Article 1463. https://doi.org/10.3389/fpsyg.2015.01463

Samuel, D. B., Lynam, D. R., Widiger, T. A., & Ball, S. A. (2012). An expert consensus approach to relating the proposed DSM-5 types and traits. *Personality Disorders: Theory, Research, and Treatment*, *3*(1), 1–16. https://doi.org/10.1037/a0023787

Santana, G. L., Coelho, B. M., Wang, Y. P., Chiavegatto Filho, A. D. P., Viana, M. C., & Andrade, L. H. (2018). The epidemiology of personality disorders in the Sao Paulo Megacity general population. *PloS one*, *13*(4).

Schotte, C., De Doncker, D., Maes, M., Cluydts, R., & Cosyns, P. (1993). MMPI *Assessment of the* DSM-III-*R Histrionic Personality Disorder. Journal of Personality Assessment, 60*(3), 500–510. doi:10.1207/s15327752jpa6003_7

Thomas, M. L. (2011). The value of item response theory in clinical assessment: a review. *Assessment*, *18*(3), 291–307. doi:10.1177/1073191110374797

Wyse, A. E., & Reckase, M. D. (2011). A Graphical Approach to Evaluating Equating Using Test Characteristic Curves. *Applied Psychological Measurement, 35*(3), 217–234. doi:10.1177/0146621610377082

doi: https://doi.org/10.15446/rcp.v34n2.115141

Loneliness in Urban Mapuche Older Adults in Chile: Ethnic Identity Affirmation, Autonomy, and Subjective Well-Being as predictors

Joan Casas-Martí
Universitat de Barcelona

Abel Soto-Higuera
Universidad de La Frontera

Leonor Riquelme-Segura
Universidad de La Frontera

Felipe Quintano-Méndez
Universidad de La Frontera
Universidad Santo Tomás

Cecilia Mayorga-Muñoz
Universidad de La Frontera

How to cite this article: Casas-Martí, J., Soto-Higuera, A., Riquelme-Segura, L., Quintano-Méndez, F. & Mayorga-Muñoz, C. (2025). Loneliness in Urban Mapuche Older Adults in Chile: Ethnic Identity Affirmation, Autonomy, and Subjective Well-Being as predictors *Revista Colombiana de Psicología*, *34*(2), 23-37.https://doi.org/10.15446/rcp.v34n2.115141

Correspondence: Felipe Quintano-Méndez (https://orcid.org/0000-0002-4955-1976).
Email: felipe.quintano@ufrontera.cl

SCIENTIFIC RESEARCH ARTICLE

RECEIVED: JUNE 19TH, 2024 - ACCEPTED: AUGUST 8TH, 2024

Loneliness in Urban Mapuche Older Adults in Chile: Ethnic Identity Affirmation, Autonomy, and Subjective Well-Being as predictors

Abstract

This study seeks to identify the factors that predict loneliness among urban Mapuche older adults in Chile. Using a cross-sectional, non-experimental design with a correlational scope, the study included 323 participants, with a mean age of 70.77 years. The findings indicate that a strong affirmation of ethnic identity affirmation, greater autonomy, higher levels of subjective well-being, and a larger number of cohabitants are associated with reduced levels of loneliness. In contrast, gender and age were not significant predictors. These results are important for developing public policies and intervention programs aimed at the urban Mapuche older adult population. Emphasizing the roles of ethnic identity, autonomy, subjective well-being, and the structural characteristics of social networks as key variables can help address loneliness in this demographic. Moreover, the study contributes to a better understanding of the dynamics of loneliness among urban indigenous populations, a group that has been underrepresented in research.

Keywords: loneliness, aging, urban Mapuche, ethnic identity affirmation, autonomy, subjective well-being.

Soledad en Personas Mayores Mapuche Urbanas en Chile: Afirmación de la Identidad Étnica, Autonomía y Bienestar Subjetivo como predictores

Resumen

Este estudio busca identificar los factores que predicen la soledad en adultos mayores mapuches urbanos en Chile. Utilizando un diseño transversal, no experimental y de alcance correlacional, el estudio incluyó 323 participantes, con una edad media de 70,77 años. Los resultados indican que una fuerte afirmación de la identidad étnica, una mayor autonomía, mayores niveles de bienestar subjetivo y un mayor número de convivientes se asocian con menores niveles de soledad. Por el contrario, el género y la edad no fueron predictores significativos. Estos resultados son importantes para el desarrollo de políticas públicas y programas de intervención dirigidos a la población adulta mayor mapuche urbana. Enfatizar el rol de la identidad étnica, la autonomía, el bienestar subjetivo y las características estructurales de las redes sociales como variables clave puede ayudar a abordar la soledad en este grupo demográfico. Además, el estudio contribuye a una mejor comprensión de la dinámica de la soledad entre las poblaciones indígenas urbanas, un grupo que ha sido subrepresentado en la investigación.

Palabras clave: soledad, envejecimiento, mapuche urbano, afirmación de identidad étnica, autonomía, bienestar subjetivo.

Introduction

Improvements in health and quality of life, combined with a reduction in birth rates, have led to an unprecedented socio-demographic transformation characterized by population aging on a global scale (Pérez, 2016). Although Chile is not yet in an advanced stage of this phenomenon, the number of people aged 60 and over has tripled in the last 40 years. The United Nations estimates that by 2050, approximately one-third of Chile's population will be elderly, representing the highest projection in Latin America (Leiva et al., 2020).

According to data from the latest national census (Instituto Nacional de Estadísticas [INE], 2018), in 2017 the population aged 60 and over was 2,816,160 people, accounting for 16.3% of the total population. Regarding the geographic distribution of this population, 85.2% reside in urban areas and 14.8% in rural areas (compared to 87.8% and 12.2%, respectively, for all age groups). However, there are significant regional variations. For instance, in the Antofagasta Region, 97.8% of older adults live in urban areas (compared to 94.1% for all age groups), while in the Metropolitan Region, 96.3% of both older adults and the entire census population reside in urban areas. In contrast, the Ñuble Region has the highest proportion of older adults living in rural areas (36.8% compared to 30.6% of the total population), followed by the Araucanía (36.0%) and Los Lagos (35.4%) regions (compared to 29.1% and 26.4% of the total population, respectively).

In this context, several studies emphasize that cities are emerging as the main places of residence for native peoples, presenting one of the most significant challenges (Brablec, 2020). In Chile, 10.6% of older adults identify as belonging to native peoples (Rojas et al., 2022), a percentage slightly lower than the 12.8% of the general population (INE, 2018). This proportion varies significantly between regions. For example, the Araucanía and Arica and Parinacota regions stand out, where more than a quarter of the elderly population identify as members of these groups, with 29.7% and 26.8%, respectively (compared to 34.3% and 35.3% in all age groups). Among these populations, the majority identify with the Mapuche people (81.7%), a higher percentage than that observed in the general population (79.8%).

It is important to note that indigenous populations in Chile have historically faced adverse life trajectories and an unequal relationship with the national government, limiting their ability to live independently and fully participate in society (Gitlin & Fuentes, 2012). Evidence of this is seen in the vulnerable circumstances in which indigenous older adults often find themselves, including a higher likelihood of poverty and social exclusion compared to non-indigenous older adults. These factors contribute to a decline in their psychosocial resources and the resulting sense of loneliness (Gallardo-Peralta et al., 2022, 2023), which has been identified as one of the main public health challenges of our time (Gerst-Emerson & Jayawardhana, 2015; Hawkley & Cacioppo, 2010; Köster & Lipps, 2024; World Health Organization [WHO], 2021).

Indeed, the aforementioned highlights how historical processes impact people's daily lives through the interplay of structural conditions and subjective experiences. In this context, the Mapuche population is no exception to the socio-historical conditions characteristic of modernity. These factors intertwine with different stages of the life cycle, as they go through processes specific to individuals aged 60 and above, which are reflected in their daily perceptions, feelings, and projections. In this scenario, examining the impact of various psychological variables on feelings of loneliness is critically important, especially in a population that has been historically neglected by both academia and society.

Loneliness

Loneliness is a negative feeling that arises when there is a discrepancy between desired and actual social relationships (Perlman & Peplau, 1982). This experience can stem from a perceived insufficiency in the number of interpersonal connections and from a lack of intimacy, affection, or

value in existing relationships (De Jong-Gierveld, 1987). Hence, a distinction has traditionally been made between *social loneliness*, referring to the former, and *emotional loneliness*, referring to the latter (Weiss, 1973).

As a subjective experience, loneliness can only be described by the person experiencing it (Routasalo et al., 2006). It must, therefore, be distinguished from social isolation, which refers to a lack of social interaction and is an objective condition (De Jong-Gierveld et al., 2006). Consequently, loneliness has also been defined as perceived social isolation (Cacioppo et al., 2010).

Loneliness can significantly affect health and well-being and is considered a public health issue by the World Health Organization (WHO, 2021). Multiple studies demonstrate a direct connection between loneliness, social isolation, and poorer quality of life, as well as various health problems, including cardiovascular disease, cognitive impairment, and depression (Cacioppo et al., 2014; Gerst-Emerson & Jayawardhana, 2015; Hawkley & Cacioppo, 2010; Steptoe et al., 2013). According to Holt-Lunstad et al. (2015), loneliness is also associated with a 26%-32% increased risk of mortality.

Several risk factors can increase the likelihood of suffering from loneliness, such as belonging to vulnerable social groups or undergoing life transitions, including loss or changes in social relationships, empty nest syndrome, the death of a partner, poor social relationships, retirement, lack of pleasurable activities, health deterioration, and discrimination and prejudice against older adults, such as ageism (WHO, 2021; Yanguas et al., 2018).

Age distribution reveals a U-shaped correlation between loneliness and age: loneliness is more prevalent among younger people, decreases with age, and then increases significantly among older adults (Dykstra, 2009; Lasgaard et al., 2016; Losada et al., 2012; Martín & González-Rábago, 2021; Pinquart & Sorensen, 2001; Yang & Victor, 2011). It is important to note that there is consensus in linking age with many factors that can influence (or be influenced by) the development of chronic loneliness, which, in turn, impacts the overall well-being of older individuals (Pinazo-Hernandis & Donio-Bellegarde, 2018).

Moreover, age serves not only as a social determinant of loneliness throughout life but also specifically among older adults (Dykstra, 2009; Lasgaard et al., 2016; Losada et al., 2012; Martín & González-Rábago, 2021; Pinquart & Sorensen, 2001; Yang & Victor, 2011). Studies indicate that loneliness generally increases in advanced stages of old age, largely due to age-related losses, both relational and physical (Pinazo-Hernandis & Donio-Bellegarde, 2018).

The gender analysis of loneliness among older adults highlights three key aspects. First, women report their loneliness more often through direct measurement methods, while men demonstrate higher loneliness levels when assessed using indirect methods, such as psychometric scales (Borys & Perlman, 1985; Nicolaisen & Thorsen, 2014). Second, women's disproportionate caregiving responsibilities predict loneliness, as caregiving often creates barriers to meaningful social connections (Barreto et al., 2021; Lopata, 1983; Pinquart & Sorensen, 2001; Warburton & Lui, 2007). Third, gender differences are observed in emotional and social loneliness: women tend to develop more active relational networks (Antonucci, 1990; Rokach et al., 2007), yet face greater emotional loneliness due to their longer life expectancy and increased exposure to widowhood (Barreto et al., 2021; Nicolaisen & Thorsen, 2014).

Regarding living arrangements, existing research indicates that people who live alone are at greater risk of experiencing loneliness (Cohen-Mansfield et al., 2016; De Jong-Gierveld, 1987; Hughes et al., 2004; Lasgaard et al., 2016; Losada et al., 2012; Routasalo et al., 2006; Sanchez, 2009; Victor et al., 2000), a trend exacerbated during the COVID-19 pandemic (Baarck et al., 2021; Köster & Lipps, 2024). However, the implications of living alone are very different if it is by choice or due to unforeseen circumstances, such as widowhood (López-Doblas, 2005). Additionally, living with

children does not necessarily protect against loneliness; satisfactory cohabitation as a couple having the greatest implications for combating it (Hansen et al., 2009).

In Chile, loneliness among older adults is an emerging field of research. The study by Carrasco et al. (2021) was the first to include a representative sample of Latin American older adults living in their countries of origin. Their pre-pandemic data show that 45% of older adults residing in Santiago, Metropolitan Region, experience loneliness, potentially related to high expectations of family relationships. However, their results revealed no association with age or sex. Herrera et al. (2021) confirmed an increase in loneliness among Chilean older adults during the COVID-19 pandemic, reporting a prevalence of 53%.

The existing literature also highlights protective aspects in aging, such as the affirmation of ethnic identity (Soto-Higuera et al., 2023).

Ethnic identity affirmation

Ethnic identity is a dynamic, multidimensional, and constantly evolving construct (Umaña-Taylor et al., 2004) that refers to an individual's sense of self concerning their membership in an ethnic group (Phinney, 1992). This concept encompasses processes of exploration —where individuals are actively involved in learning about their culture, their traditions, and the meaning of these in their lives— and affirmation, which involves developing positive feelings and a strong attachment to the ethnic group. In the field of aging, there is evidence that the latter process significantly contributes to successful aging (Soto-Higuera et al., 2023).

However, ethnic minorities, including older adults, face complex challenges due to heightened inequalities in health, education, and working conditions, as well as experiences of racism and forced migration, among others (Quigley et al., 2022). A significant transformation in these communities is the increase in single-person households or older couples living alone, along with growing institutionalization. These changes are reshaping a care system traditionally organized around extended family and intergenerational care (Gallardo-Peralta et al., 2023). Hence, loneliness may be even more intense in groups historically disadvantaged socially, politically, economically, and even territorially (Rodríguez-Blázquez et al., 2021; Sánchez-Moreno et al., 2021).

The analysis of loneliness among ethnic minorities is progressing, but there remains a scarcity of research on this topic. Internationally, studies comparing loneliness across different age groups have found a higher incidence among ethnic minorities (Baarck et al., 2021). In Chile, research have focused exclusively on rural areas. While some studies associate ethnic group affiliation with lower loneliness scores compared to the general older adult population (Sánchez-Moreno et al., 2021), others suggest that loneliness affects Chilean older adults cross-culturally, with the COVID-19 pandemic exacerbating its impact on well-being (Gallardo-Peralta et al., 2023).

Autonomy as an element of quality of life

The World Health Organization (1995) defines quality of life as a subjective concept based on an individual's perception of their position in life within the context of their culture and value system in which they live and their relation to goals, expectations, standards, and interests. It is widely considered a multidimensional concept that, in the case of older adults, is expected to be positively constructed, fostering the recognition of old age as a continuation of life rather than a phase of functional decline and social isolation (Queirolo et al., 2020).

Research has examined numerous factors influencing older adults' quality of life. The principle of autonomy —defined as the ability to make one's own decisions, feel in control of one's future, and pursue personal desires (Urzúa & Navarrete, 2013)— is particularly noteworthy. It provides a conceptual framework for understanding older

adults' quality of life (Clark, 1988) and has been linked to social participation, life satisfaction, and better health outcomes (Gwozdz & Sousa-Poza, 2010; Zapata-López et al., 2015). Despite being a prioritized dimension in care services for older adults (Bishop, 1999), it has received limited attention in the Latin American context and in research on indigenous older adults.

The association between reduced autonomy and loneliness has been explored mainly through functional impairment rather than psychological autonomy linked to independence. Functional decline often increases loneliness by limiting social interaction opportunities and making it difficult for older adults to maintain their lifestyle (Sánchez, 2009). Autonomy facilitates the establishment and maintenance of social relationships (Pinquart & Sorensen, 2001). Conversely, functional decline restricts the older adults' ability to maintain social contacts, leave home, and participate in activities that counteract boredom (Cohen-Mansfield et al., 2016). It may also lead to the disconnection of friendships in an effort not to "overburden" them (Johnson, 1983). Furthermore, the need for care —or its perception— can create tension in relationships with family caregivers, reducing the likelihood of emotional needs being met (Casas-Martí, 2023; Sánchez, 2009). By contrast, cohesive and flexible family relationships that adapt to the aging process through affective and emotional support improve objective and subjective living conditions (Mayorga-Muñoz et al., 2019).

Subjective well-being as an element of quality of life

Subjective well-being is another key component of quality of life, encompassing individual and social dimensions (Casas, 1996). It reflects how people evaluate their lives, including both positive and negative aspects, and serves as an indicator of the "realized" quality of life within a country or social category. Two main components are identified: eudaimonism, related to personal self-realization, and hedonism, linked to emotions (Oyanedel et al., 2015).

In the hedonic domain, happiness represents a general affective evaluation, while life satisfaction refers to a cognitive appraisal of a person's subjective well-being based on the comparison and perceived discrepancy between their aspirations and achievements (Bishop et al., 2006). Other authors have defined it as the harmony between desired and achieved goals in life (Altay & Çalmaz, 2023). It is considered a relatively stable indicator from middle age to old age, and in the later stages of life, this satisfaction could represent an overall reflection on lifetime achievements and goals (von Humboldt et al., 2014).

Satisfaction scales are widely recognized tools for assessing subjective well-being, enabling individuals to make global assessments of their lives or about specific areas of their lives. Furthermore, satisfaction in particular life domains has been shown to have a direct impact on the perception of overall life satisfaction (Rojo et al., 2012). Quantitative studies have linked loneliness in older adults to lower subjective well-being (Rojo et al., 2012) and low life satisfaction (Cohen-Mansfield et al., 2016), but there is a lack of evidence for the older Mapuche population. Some studies have shown that increased loneliness correlates with reduced life satisfaction (Altay & Çalmaz, 2023). Lorber et al. (2023) observed heightened loneliness and decreased life satisfaction during the COVID-19 pandemic, emphasizing the influence of global events on these phenomena.

In the context of Chile's aging population and the growing recognition of loneliness as a public health issue, older Mapuche individuals in urban areas represent a group with unique characteristics and needs. Ethnic identity affirmation, autonomy, and subjective well-being are key factors for their well-being, particularly in vulnerable contexts. Nonetheless, there is a gap in the literature regarding how these factors interact to shape perceptions of loneliness in this population. This study aims to determine whether ethnic identity affirmation,

autonomy, and subjective well-being predict loneliness in older Mapuche adults living in urban areas of the Araucanía region, Chile.

Methods

Design

We employed a quantitative approach with a cross-sectional, non-experimental design of correlational scope (Cea D'Ancona, 1996). The study was approved by the Scientific Ethics Committee of the Universidad de La Frontera (Page N°009/20).

Participants

The study included 323 respondents. Of these, 63.2% (n = 204) were women, and 36.8% (n = 119) were men. The mean age was 70.77 years (SD = 7.273), ranging from 60 to 96 years. Regarding marital status, 58.5% (n = 189) reported being married, 16.7% (n = 54) identified as single, and 16.1% (n = 52) as widowed. In terms of living arrangements, 48% (n = 155) lived with one other person, 38.7% (n = 125) lived with more than one person, and 13.3% (n = 43) lived alone. Finally, 98.5% (n = 318) identified as Mapuche, and 1.5% (n = 5) as Huilliche..

Instruments

- **Loneliness:** A 6-item version of the De Jong Gierveld Loneliness Scale (DJGLS-6) (De Jong-Gierveld & van Tilburg, 2006). The Spanish version had previously been validated with Chilean older adults from multiethnic samples, including indigenous groups (Rodríguez-Blázquez et al., 2021), showing a Cronbach's alpha of 0.73.
- **Ethnic identity affirmation:** This is the 7-item affirmation subscale of the short version of the Multigroup Ethnic Identity Measure (MEIM). It was designed by (Phinney , 1992) and validated with Chilean older adults (Soto-Higuera et al., 2023) with an alpha of 0.89. The full instrument includes 12 items that assess both affirmation and exploration of ethnic identity.
- **Autonomy:** The autonomy subscale consisted of 4 items from the WHOQOL-OLD quality of life scale (Power et al., 2005). It was validated among Chilean older adults (Urzúa & Navarrete, 2013), with a Cronbach's alpha of 0.80. This scale includes 24 items that assess sensory skills, past, present, and future activities, social participation, death and dying, and intimacy.
- **Subjective well-being:** The Personal Well-being Index (PWI) was validated with Chilean older adults (Gallardo-Peralta et al., 2019) and has an alpha of 0.92. Its 9-item version measures subjective well-being across dimensions such as standard of living, level of health, achievements, personal relationships, personal safety, community, future security, and religion and spirituality. It also includes an overarching question on overall life satisfaction (Oyanedel et al., 2015).

Procedure

Participants were recruited through interviewers trained in municipal programs across La Araucanía, Chile. The interviewers provided detailed explanations about the study objectives, the confidentiality of responses, and the participants' anonymity, after which the participants signed an informed consent. Data were collected through personal interviews using the research instruments between January and August 2022.

Data analysis

The data were stored in the SPSS v.23 software. The database was cleaned by identifying univariate missing cases through z-scores (Myers, 2011). After consolidating the dataset to 323 cases, a univariate analysis was conducted using measures of central tendency, dispersion, and shape to observe data behavior. Pearson's correlation analysis was applied

to identify relationships between psychological factors included in the study. A multiple linear regression analysis was then performed to assess the relationship between independent variables (subjective well-being, autonomy, ethnic identity affirmation, number of cohabitants, age, and sex) and the dependent variable (loneliness). The sex variable was coded as a dummy variable (0 = male, 1 = female).

Results

Descriptive analysis

The descriptive results are summarized in Table 1.

Subsequently, the bivariate analysis showed a low correlation between the instruments, supporting the consideration that these scales measure distinct constructs. Additionally, the correlations

Table 1.
Descriptive statistics

	Loneliness	Subjective well-being	Autonomy	Ethnic identity affirmation
N	323	323	323	323
Mean	1.4917	6.0584	3.9226	3.6378
Median	1.3333	6.0000	4.0000	3.8000
Standard deviation	.31100	.61199	.72514	.85491
Skewness	.627	-.508	-.336	-.459
Kurtosis	-.167	.057	-.344	-.264
Minimum	1.00	4.13	1.50	1.00
Maximum	2.50	7.00	5.00	5.00

Source: prepared by the authors.

Table 2.
Bivariate correlations

		Subjective well-being	Autonomy	Ethnic identity affirmation
Loneliness	Pearson's correlation	-.330**	-.319**	-.243**
	(Bilateral) sig.	.000	.000	.000
	N	323	323	323
Subjective well-being	Pearson's correlation		.375**	.164**
	(Bilateral) sig.		.000	.003
	N		323	323
Quality of Life (Autonomy)	Pearson's correlation			.089
	(Bilateral) sig.			.112
	N			323

Source: prepared by the authors.

were negative, indicating that the relationships between the independent and dependent variables were inverse. Refer to Table 2 for further details.

Multiple regression análisis

The multiple linear regression model yielded statistically significant results $p < .001$, $R2 = 0.205$, adjusted $R2 = 0.190$, and $F = 13.577$. Additionally, the model produced a Durbin-Watson statistic of 0.954 and an inflation index below 4, indicating acceptable levels of multicollinearity. Table 3 highlights that life satisfaction, autonomy, ethnic affirmation, and the number of people living with the respondent significantly influence the variability in loneliness. Conversely, age and gender were not found to be significant predictors in this regression model.

Discussion

This study focused on identifying whether ethnic identity affirmation, autonomy, and life satisfaction predict loneliness among urban Mapuche older adults in the Araucanía region of Chile. The results contribute to a better understanding of loneliness dynamics within this specific group and highlight the growing need for intersectional approaches in studying loneliness and aging (Martínez-Palacios, 2020).

The number of cohabitants is also related to loneliness, consistent with other findings from research in non-indigenous populations (Baarck et al., 2021; Cohen-Mansfield et al., 2016; De Jong-Gierveld, 1987; Hughes et al., 2004; Köster & Lipps, 2024; Lasgaard et al., 2016; Losada et al., 2012; Routasalo et al., 2006; Victor et al., 2000).

Table 3.
Multiple linear regression análisis

	Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
	B	Standard error	Beta			Tolerance	VIF
Loneliness	2.836	.171		16.565	.000		
Subjective well-being	-.110	.028	-.217	-3.960	.000	.837	1.194
Autonomy	-.105	.024	-.246	-4.343	.000	.787	1.271
Ethnic identity affirmation	-.062	.019	-.171	-3.302	.001	.941	1.062
Number of people living with the respondent	-.031	.012	-.128	-2.465	.014	.930	1.076
Age	-.012	.053	-.011	-.225	.822	.973	1.028
Sex	.020	.033	.032	.610	.542	.935	1.070

Source: prepared by the authors.

This underscores the importance of both intra- and extrafamilial structural elements of social networks (Sánchez, 2009). The family environment often acts as a support system, facilitating help and care transactions. Consequently, regular interactions with other family members contribute to fulfilling material, emotional, and affective needs, influencing a perception of increased subjective well-being, satisfaction with life, and subsequently lowering feelings of loneliness. This benefit is also derived

from using resources and support networks outside the family (Mayorga-Muñoz et al., 2019; Rojo et al., 2012; Zapata-López et al., 2015).

The lack of significance in gender coincides with the results of Carrasco et al. (2021) since the confirmatory factor analysis of the scale validated in Chile does not differentiate between social and emotional loneliness dimensions (Rodríguez-Blázquez et al., 2021), unlike the original scale (De Jong-Gierveld & van Tilburg, 2006). These dimensions are often considered critical in defining the relationship between loneliness and gender (Barreto et al., 2021; Nicolaisen & Thorsen, 2014).

Regarding age, the lack of significance contrasts with studies on older populations not belonging to indigenous groups (Dykstra, 2009; Lasgaard et al., 2016; Losada et al., 2012; Martín & González-Rábago, 2021; Pinquart & Sørensen, 2001; Yang & Victor, 2011) but aligns with research conducted among Chilean urban older adults (Carrasco et al., 2021).

Additionally, it was observed that a strong ethnic identity affirmation in Mapuche elders is inversely associated with loneliness. This supports Phinney's (1992) theory, suggesting that ethnic identity fosters a sense of belonging and community. This aligns with studies linking ethnic identity with successful aging (Soto-Higuera et al., 2023). The findings challenge the presumption that indigenous communities predominantly reside in rural areas, rendering urban indigeneity invisible (Brablec, 2020). However, from a broader consideration of ethnic identity, this result also raises questions about the effects of urbanization on the affirmation of ethnic identity, often perceived as being under threat from dominant cultural values.

Autonomy emerged as another significant factor in reducing loneliness. The ability to make independent decisions and maintain control over one's life proved crucial for mitigating loneliness among Mapuche older adults. This aligns with other studies recognizing autonomy as a protective factor for well-being (Gwozdz & Sousa-Poza, 2010). The findings emphasize the need for policies and programs that respect and promote autonomy in this population (Bishop, 1999) and places the psychological dimension of autonomy at the center of the analysis, beyond functional capacity (Urzúa & Navarrete, 2013).

The study highlights a close correlation between subjective well-being and loneliness. This complex link suggests that greater subjective well-being may buffer or mitigate loneliness. This finding is in line with other studies on populations that do not identify with indigenous peoples (Altay & Çalmaz, 2023; Cohen-Mansfield et al., 2016; Lorber et al., 2023; Rojo et al., 2012), providing evidence to suggest that promoting subjective well-being and life satisfaction should be integral to interventions targeting older adults, including policies and programs aimed at reducing loneliness.

In terms of the limitations, it should be noted that non-probability convenience sampling was used; therefore, the results cannot be generalized to all urban Mapuche older adult populations.

Future research should focus on generating intersectional knowledge that, in the case of ethnic diversity, makes urban native peoples visible. It also calls for comparative studies including other ethnic groups in Chile. This comparative perspective could identify key differences and similarities, enabling the development of more effective and inclusive interventions and policies tailored to the needs of diverse older populations.

Conclusions

Statistically significant correlations were identified between ethnic identity affirmation, autonomy, subjective well-being, and loneliness among urban Mapuche older adults in Chile. Another notable finding is the inverse relationship between loneliness and the number of cohabitants, consistent with previous research on non-Mapuche populations. Variables such as gender and age did not significantly influence loneliness in this context.

These results are critical for informing public policy. Interventions focused on affirming ethnic identity, promoting autonomy, and enhancing

subjective well-being may be effective strategies to mitigate loneliness in this population. Such approaches have the potential to improve the quality of life for Mapuche older adults, deepen their understanding of urban environments, and address the phenomenon of loneliness more effectively.

References

Altay, B., & Çalmaz, A. (2023). Perception of loneliness and life satisfaction in the elderly during the COVID-19 pandemic process. *Psychogeriatrics*, *23*(1), 177–186. https://doi.org/10.1111/psyg.12911

Antonucci, T. C. (1990). Social support and social relationships. In R. H. Binstock & L. K. George (Eds.), *Handbook of aging and the social sciences* (3rd ed, pp. 205–225). Academic Press.

Baarck, J., Balahur-Dobrescu, A., Cassio, L. G., D'hombres, B., Pasztor, Z., & Tintori, G. (2021). *Loneliness in the eu. Insights from surveys and online media data*. https://doi.org/10.2760/28343

Barreto, M., Victor, C., Hammond, C., Eccles, A., Richins, M. T., & Qualter, P. (2021). Loneliness around the world: Age, gender, and cultural differences in loneliness. *Personality and Individual Differences*, *169*, 110066. https://doi.org/10.1016/j.paid.2020.110066

Bishop, A. J., Martin, P., & Poon, L. (2006). Happiness and congruence in older adulthood: A structural model of life satisfaction. *Aging & Mental Health*, *10*(5), 445–453. https://doi.org/10.1080/13607860600638388

Bishop, B. (1999). *The national strategy for an ageing Australia: Background paper*. Commonwealth of Australia.

Borys, S., & Perlman, D. (1985). Gender Differences in Loneliness. *Personality and Social Psychology Bulletin*, *11*(1), 63–74. https://doi.org/10.1177/0146167285111006

Brablec, D. (2020). ¿Quién cuenta como un auténtico indígena? Negociaciones de identidad colectiva en el contexto urbano chileno. Sociología, 55, 129–145. https://doi.org/10.1177/0038038520915435

Cacioppo, J. T., Hawkley, L. C., & Thisted, R. A. (2010). Perceived social isolation makes me sad: 5-year cross-lagged analyses of loneliness and depressive symptomatology in the Chicago Health, Aging, and Social Relations Study. *Psychology and Aging*, *25*(2), 453–463. https://doi.org/10.1037/a0017216

Cacioppo, S., Capitanio, J. P., & Cacioppo, J. T. (2014). Toward a neurology of loneliness. *Psychological Bulletin*, *140*(6), 1464–1504. https://doi.org/10.1037/a0037618

Carrasco, M., Fernández, Mb., Alexander, E., & Herrera, Ms. (2021). Loneliness in Older Chilean People: Importance of Family Dysfunction and Depression. *International Journal of Mental Health Promotion, 23*(1), 99–109. https://doi.org/10.32604/ijmhp.2021.011568

Casas, F. (1996). *Bienestar social. Una introducción psicosocial.* PPU.

Casas-Martí, J. (2023). Loneliness and conflicts in hospitals: An outlook from the field of social work, the ethics of care and the discharge planning for dependent elderly people. *Cuadernos de Trabajo Social, 36*(1), 113-122. https://dx.doi.org/10.5209/cuts.82419

Cea D´Ancona, M. (1996). *Metodología Cuantitativa: Estrategias y Técnicas de Investigación Social.* Síntesis.

Clark, P. G. (1988). Autonomy, Personal Empowerment, and Quality of Life in Long-Term Care. *Journal of Applied Gerontology*, *7*(3), 279–297. https://doi.org/10.1177/073346488800700302

Cohen-Mansfield, J., Hazan, H., Lerman, Y., & Shalom, V. (2016). Correlates and predictors of loneliness in older-adults: A review of quantitative results informed by qualitative insights. *International Psychogeriatrics*, *28*(4), 557–576. https://doi.org/10.1017/S1041610215001532

De Jong-Gierveld, J. (1987). Developing and testing a model of loneliness. *Journal of Personality and Social Psychology*, *53*(1), 119–128. https://doi.org/10.1037/0022-3514.53.1.119

De Jong-Gierveld, J., & van Tilburg, T. (2006). A 6-Item Scale for Overall, Emotional, and Social Loneliness: Confirmatory Tests on Survey Data. *Research on Aging*, *28*(5), 582–598. https://doi.org/10.1177/0164027506289723

De Jong-Gierveld, J., van Tilburg, T., & Dykstra, P. A. (2006). Loneliness and social isolation. In A. L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook*

of personal relationships (pp. 485–500). Cambridge University Press. https://doi.org/10.2277/0521826179

Dykstra, P. A. (2009). Older adult loneliness: Myths and realities. *European Journal of Ageing*, *6*(2), 91–100. https://doi.org/10.1007/s10433-009-0110-3

Esteban, M. (2010). Propiedades psicométricas y estructura factorial de la Escala de Identidad étnica Multigrupo en español (MEIM). *Revista Latinoamericana de Psicología, 42*(3), 15–21.

Gallardo-Peralta, L. P., Gálvez-Nieto, J. L., Fernández-Dávila, P., & Veloso-Besio, C. (2023). Loneliness and Psychosocial Resources among Indigenous and Afro-Descendant Older People in Rural Areas of Chile. *International Journal of Environmental Research and Public Health*, *20*(3), 2138. https://doi.org/10.3390/ijerph20032138

Gallardo-Peralta, L. P., Molina Martínez, M. A., & Schettini del Moral, R. (2019). Validación del Índice de Bienestar Personal (PWI) para adultos mayores chilenos. *Psicogeriatría Internacional, 31*(11), 1679–1680. https://doi.org/10.1017/S1041610218002375

Gallardo-Peralta, L. P., Soto-Huguera, A., & Vargas-Pizarro, L. (2022). Trabajo social gerontológico y diversidad étnica: Una reflexión desde el caso de las comunidades aymaras y mapuches en Chile. *Propuestas Críticas en Trabajo Social-Critical Proposals in Social Work*, *2*(4), Article 4. https://doi.org/10.5354/2735-6620.2022.61504

Gerst-Emerson, K., & Jayawardhana, J. (2015). Loneliness as a Public Health Issue: The Impact of Loneliness on Health Care Utilization Among Older Adults. *American Journal of Public Health*, *105*(5), 1013–1019. https://doi.org/10.2105/ajph.2014.302427

Gitlin, L. N., & Fuentes, P. (2012). The Republic of Chile: An Upper Middle-Income Country at the Crossroads of Economic Development and Aging. *The Gerontologist*, *52*(3), 297–305. https://doi.org/10.1093/geront/gns054

Gwozdz, W., & Sousa-Poza, A. (2010). Ageing, Health and Life Satisfaction of the Oldest Old: An Analysis for Germany. *Social Indicators Research*, *97*(3), 397–417. https://doi.org/10.1007/s11205-009-9508-8

Hansen, T., Slagsvold, B., & Moum, T. (2009). Childlessness and Psychological Well-Being in Midlife and Old Age: An Examination of Parental Status Effects Across a Range of Outcomes. *Social Indicators Research*, *94*(2), 343–362. https://doi.org/10.1007/s11205-008-9426-1

Hawkley, L. C., & Cacioppo, J. T. (2010). Loneliness matters: A theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine*, *40*(2), 218–227. https://doi.org/10.1007/s12160-010-9210-8

Herrera, M. S., Elgueta, R., Fernández, M. B., Giacoman, C., Leal, D., Marshall, P., Rubio, M., & Bustamante, F. (2021). A longitudinal study monitoring the quality of life in a national cohort of older adults in Chile before and during the COVID-19 outbreak. *bmc Geriatrics*, *21*(1), 143. https://doi.org/10.1186/s12877-021-02110-3

Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and Social Isolation as Risk Factors for Mortality: A Meta-Analytic Review. *Perspectives on Psychological Science*, *10*(2), 227–237. https://doi.org/10.1177/1745691614568352

Hughes, M. E., Waite, L. J., Hawkley, L. C., & Cacioppo, J. T. (2004). A Short Scale for Measuring Loneliness in Large Surveys: Results From Two Population-Based Studies. *Research on Aging*, *26*(6), 655–672. https://doi.org/10.1177/0164027504268574

INE. (2018). *Síntesis de resultados. Censo 2017*. http://www.censo2017.cl/descargas/home/sintesis-de-resultados-censo2017.pdf

Johnson, C. L. (1983). Fairweather Friends And Rainy Day Kin: An Anthropological Analysis of Old Age Friendships in The United States. *Urban Anthropology*, *12*(2), 103–123. https://www.jstor.org/stable/40553002

Köster, F., & Lipps, O. (2024). How loneliness increased among different age groups during COVID-19: A longitudinal analysis. *European Journal of Ageing*, *21*(1), 2. https://doi.org/10.1007/s10433-023-00798-3

Lasgaard, M., Friis, K., & Shevlin, M. (2016). "Where are all the lonely people?" A population-based study of high-risk groups across the life span. *Social Psychiatry and Psychiatric Epidemiology*, *51*(10), 1373–1384. https://doi.org/10.1007/s00127-016-1279-3

Leiva, A. M., Troncoso-Pantoja, C., Martínez-Sanguinetti, M. A., Nazar, G., Concha-Cisternas, Y., Martorell, M., Ramírez-Alarcón, K., Petermann-Rocha, F.,

Cigarroa, I., Díaz, X., & Celis-Morales, C. (2020). Personas mayores en Chile: El nuevo desafío social, económico y sanitario del Siglo XXI. *Revista Médica de Chile*, *148*(6), 799–809. https://doi.org/10.4067/S0034-98872020000600799

Lopata, H. Z. (1983). Loneliness: Forms and components. In R. S. Weiss (Ed.), *Loneliness: The Experience of Emotional and Social Isolation* (pp. 102–115). MIT Press.

López-Doblas, J. (2005). *Personas Mayores viviendo solas: La autonomía como valor en alza*. Ministerio de Trabajo y Asuntos Sociales, Secretaría de Estado de Servicios Sociales, Familias y Discapacidad, Instituto de Mayores y Servicios Sociales.

Lorber, M., Černe Kolarič, J., Kmetec, S., & Kegl, B. (2023). Association between Loneliness, Well-Being, and Life Satisfaction before and during the COVID-19 Pandemic: A Cross-Sectional Study. *Sustainability*, *15*(3), Article 3. https://doi.org/10.3390/su15032825

Losada, A., Márquez-González, M., García-Ortiz, L., Gómez-Marcos, M. A., Fernández-Fernández, V., & Rodríguez-Sánchez, E. (2012). Loneliness and Mental Health in a Representative Sample of Community-Dwelling Spanish Older Adults. *The Journal of Psychology*, *146*(3), 277–292. https://doi.org/10.1080/00223980.2011.582523

Martín, U., & González-Rábago, Y. (2021). Soledad no deseada, salud y desigualdades sociales a lo largo del ciclo vital. *Gaceta Sanitaria*, *35*(5), 432–437. https://doi.org/10.1016/j.gaceta.2020.07.010

Martínez-Palacios, J. (2020). La interseccionalidad como herramienta analítica para la praxis crítica del Trabajo Social. Reflexiones en torno a la soledad no deseada. *Cuadernos de Trabajo Social, 33*(2), 379-390. https://doi.org/10.5209/cuts.65181

Mayorga-Muñoz, C., Gallardo-Peralta, L., & Galvez-Nieto, J. L. (2019). Propiedades psicométricas de la escala APGAR-familiar en personas mayores residentes en zonas rurales multiétnicas chilenas. *Revista médica de Chile, 147*(10), 1283-1290. http://dx.doi.org/10.4067/s0034-98872019001001283

Myers T. (2011). Goodbye, listwise deletion: presenting hot deck imputation as an easy and effective tool for handling missing data. *Commun Methods Meas, 5*, 297–310. https://doi.org/10.1080/19312458.2011.624490

Nicolaisen, M., & Thorsen, K. (2014). Who are Lonely? Loneliness in Different Age Groups (18–81 Years Old), Using Two Measures of Loneliness. *The International Journal of Aging and Human* Development, 78(3), 229–257. https://doi.org/10.2190/ag.78.3.b

Oyanedel, J. C., Vargas, S., Mella, C. & Páez, D. (2015). Validación del índice de bienestar personal (PWI) en usuarios vulnerables de servicios de salud en Santiago, Chile. *Revista médica de Chile, 143*(9), 1144-1151. https://dx.doi.org/10.4067/S0034-98872015000900007

Pérez, J. (2016). El temor al envejecimiento demográfico. In S. Ezquerra, M. Pérez, M. Pla, & J. Subirats (Eds.), *Edades en transición. Envejecer en el siglo xxi* (pp. 44–55). Editorial Ariel.

Perlman, D., & Peplau, L. A. (1982). Theoretical Approaches to Loneliness. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A Sourcebook of Current Theory, Research and Therapy* (pp. 123–134). Wiley.

Phinney, J. S. (1992). The Multigroup Ethnic Identity Measure: A New Scale for Use with Diverse Groups. *Journal of Adolescent Research*, *7*(2), 156–176. https://doi.org/10.1177/074355489272003

Pinazo-Hernandis, S., & Donio-Bellegarde, M. (2018). *La soledad de las personas mayores: Conceptualización, valoración e intervención*. Fundación Pilares para la Autonomía Personal.

Pinquart, M., & Sorensen, S. (2001). Influences on Loneliness in Older Adults: A Meta-Analysis. *Basic and Applied Social Psychology*, *23*(4), 245–266. https://doi.org/10.1207/S15324834basp2304_2

Power, M., Quinn, K., Schmidt, S., & WHOQOL-OLD Group. (2005). Development of the WHOQOL-old module. *Quality of Life Research: An International Journal of Quality of Life, Aspects of Treatment, Care and Rehabilitation*, *14*(10), 2197–2214. https://doi.org/10.1007/s11136-005-7380-9

Queirolo, S. A., Barboza-Palomino, M., & Ventura-León, J. (2020). Medición de la calidad de vida en adultos mayores institucionalizados de Lima (Perú). *Enfermería Global*, *19*(4), 259–288. https://doi.org/10.6018/eglobal.420681

Quigley, R., Russell, S. G., Larkins, S., Taylor, S., Sagigi, B., Strivens, E., & Redman-MacLaren, M. (2022). Aging Well for Indigenous Peoples: A Scoping Review. *Frontiers in Public Health*, *10*, 780898. https://doi.org/10.3389/fpubh.2022.780898

Rodríguez-Blázquez, C., Ayala-García, A., Forjaz, M. J., & Gallardo-Peralta, L. P. (2021). Validation of the De Jong Gierveld Loneliness Scale, 6-item version, in a multiethnic population of Chilean older adults. *Australasian Journal on Ageing*, *40*(2), e100–e108. https://doi.org/10.1111/ajag.12893

Rojas, F. H., Rodríguez, L., & Rodríguez, J. (2022). *Documentos de trabajo. envejecimiento en chile: Evolución, características de las personas mayores y desafíos demográficos para la población*. Instituto Nacional de Estadísticas. https://www.ine.gob.cl/docs/default-source/demografia-y-migracion/documentos-de-trabajo/documentos/envejecimiento-en-chile-evolucion-y-caracteristicas-de-las-personas-mayores.pdf?sfvrsn=b76bd496_4

Rojo, F., Fernández-Mayoralas, G., Rodríguez Rodríguez, V., Forjaz, M. J., Rodríguez, C., Prieto, M. E., Rojo, J. M., & Martínez-Martín, P. (2012). The Personal Wellbeing among Community-Dwelling Older Adults in Spain and Associated Factors. *Journal of Social Research & Policy, 3*(2), 67-94. https://doi.org/10.13039/501100003086

Rokach, A., Matalon, R., Rokach, B., & Safarov, A. (2007). The effect of gender and marital status on loneliness of the aged. *Social Behavior and Personality: An International Journal*, *35*(2), 243–254. https://doi.org/10.2224/sbp.2007.35.2.243

Routasalo, P. E., Savikko, N., Tilvis, R. S., Strandberg, T. E., & Pitkälä, K. H. (2006). Social contacts and their relationship to loneliness among aged people —A population-based study. *Gerontology*, *52*(3), 181–187. https://doi.org/10.1159/000091828

Sánchez, M. M. (2009). *Determinantes sociales de la soledad en las personas mayores: Dar y recibir apoyo en el proceso de envejecer* [Doctoral thesis, Universidad de Salamanca]. http://hdl.handle.net/10366/76320

Sánchez-Moreno, E., Gallardo-Peralta, L. P., & Leyton, C. (2021). The Social Gradient in Mental Health and Well-Being for Indigenous Older Adults Living in Rural Areas: A Cross-Sectional Comparison With Rural Non-indigenous Population in Chile. *Journal of Aging and Health*, *33*(5–6), 287–299. https://doi.org/10.1177/0898264320979201

Soto-Higuera, A., Gallardo-Peralta, L., Sánchez-Moreno, E., & Rodríguez-Rodríguez, V. (2023). Estructura Factorial, Fiabilidad e Invarianza de la Escala de Identidad Étnica Multigrupo (EIEM) en personas mayores Aymaras y Mapuches. *Revista iberoamericana de diagnóstico y evaluación psicológica, 67*(1), 75–86. https://doi.org/10.21865/ridep67.1.06

Soto-Higuera, A., Riquelme-Segura, L., & Quintano-Méndez, F. (2023). Relationship Between Identity Affirmation, Autonomy and Successful Aging in Chilean Urban Mapuche Indigenous Older Adults. *Journal of Population Ageing*. https://doi.org/10.1007/s12062-023-09429-2

Steptoe, A., Shankar, A., Demakakos, P., & Wardle, J. (2013). Social isolation, loneliness, and all-cause mortality in older men and women. *Proceedings of the National Academy of Sciences of the United States of America*, *110*(15), 5797–5801. https://doi.org/10.1073/pnas.1219686110

Umaña-Taylor, A. J., Yazedjian, A., & Bámaca-Gómez, M. (2004). Developing the Ethnic Identity Scale Using Eriksonian and Social Identity Perspectives. *Identity*, *4*(1), 9–38. https://doi.org/10.1207/S1532706xid0401_2

Urzúa, A., & Caqueo-Urízar, A. (2012). Calidad de vida: Una revisión teórica del concepto. *Terapia Psicológica*, *30*(1), 61–71. https://doi.org/10.4067/S0718-48082012000100006

Urzúa, A., & Navarrete, M. (2013). Calidad de vida en adultos mayores: Análisis factoriales de las versiones abreviadas del WHOQoL-Old en población chilena. *Revista Médica de Chile*, *141*(1), 28–33. https://doi.org/10.4067/S0034-98872013000100004

Victor, C. R., Scambler, S., Bond, J., & Bowling, A. (2000). Being alone in later life: Loneliness, social isolation and living alone. *Reviews in Clinical Gerontology*, *10*(4), 407–417. https://doi.org/10.1017/S0959259800104101

von Humboldt, S., Leal, I., & Pimenta, F. (2014). Living Well in Later Life: The Influence of Sense of Coherence, and Socio-Demographic, Lifestyle and Health-Related Factors on Older Adults' Satisfaction

with Life. *Applied Research in Quality of Life*, *9*(3), 631–642. https://doi.org/10.1007/s11482-013-9262-6

Warburton, J., & Lui, C.-W. (2007). Social isolation and loneliness in older people: A literature review. *Australasian Centre on Ageing*.

Weiss, R. S. (1973). *Loneliness: The Experience of Emotional and Social Isolation*. MIT Press.

World Health Organization. (1995). The World Health Organization Quality of Life assessment (WHOQOL): Position paper from the World Health Organization. *Social Science & Medicine (1982)*, *41*(10), 1403–1409. https://doi.org/10.1016/0277-9536(95)00112-k

World Health Organization. (2021). *Social isolation and loneliness among older people: Advocacy brief*. World Health Organization, International Telecommunications Union, United Nations Department of Economic and Social Affairs.

Yang, K., & Victor, C. (2011). Age and loneliness in 25 European nations. *Ageing and Society*, *31*(8), 1368–1388. https://doi.org/10.1017/S0144686X1000139X

Yanguas, J., Cilvetti, A., Hernández, S., Pinazo-Hernandis, S., Roig, S., & Segura, C. (2018). El reto de la soledad en la vejez. *zerbitzuan*, *66*, 61–75. https://doi.org/10.5569/1134-7147.66.05

Zapata-López, B. I., Delgado-Villamizar, N. L., & Cardona-Arango, D. (2015). Apoyo social y familiar al adulto mayor del área urbana en Angelópolis, Colombia 2011. *Revista de salud pública*, *17*(6), 848-860. http://dx.doi.org/10.15446/rsap.v17n6.34739

Financing / Acknowledgements

- This study is part of a larger study about successful aging in Mapuche indigenous older adults resident in urban areas in the region of La Araucanía, Chile (DIUFRO DI20-0052, Universidad de La Frontera).
- JCM was funded by the FPU-grant FPU 21/01738 from the Spanish Ministry of Science, Innovation and Universities.

doi:https://doi.org/ 10.15446/rcp.v34n2.112987

Explaining Commuter Transport Choice During the COVID-19 Pandemic: A Study Based on the Theory of Planned Behavior

Eduarda Lehmann Bannach
Université Paris Cité, Univ Gustave Eiffel

Alessandra Bianchi
Universidade Federal do Paraná

Samira Bourgeois-Bougrine
Université Paris Cité, Univ Gustave Eiffel

Patricia Delhomme
Univ Gustave Eiffel, Université Paris Cité

How to cite this article: Bannach, E., Bianchi, A., Bourgeois- Bougrine, S. & Delhomme, P. Explaining Commuter Transport Choice During the COVID-19 Pandemic: A Study Based on the Theory of Planned Behavior. *Revista Colombiana de Psicología, 34*(2), 39-58. https://doi.org/ 10.15446/rcp.v34n2.112987

This research received funding from the Institutional Call for Scientific Research 2021 (project 158/2021), as well as a scholarship from CONACYT (764271).

Correspondence: Eduarda Lehmann Bannach (https://orcid.org/0000-0003-2617-1046).
Email: eduardabannach@gmail.com

SCIENTIFIC RESEARCH ARTICLE

RECEIVED: FEBRUARY 16 TH, 2024 - ACCEPTED: AUGUST 30TH, 2024

Explaining Commuter Transport Choice During the COVID-19 Pandemic: A Study Based on the Theory of Planned Behavior

Abstract

Little is known about what influenced mobility behavior in Brazil during the COVID-19 pandemic. This study, grounded in the Theory of Planned Behavior, aims to examine how Brazilians decided on their mode of transportation during this period. An online survey was conducted with 404 individuals working in person. The results indicated that: 1) the main reason for choosing the transport mode was time-saving, followed by comfort and the perceived risk of contracting COVID-19; 2) there was a significant increase in the use of personal vehicles compared to public transportation at the onset of the pandemic; 3) participants demonstrated positive attitudes toward individual transport modes, such as cars; and 4) attitudes and subjective norms significantly predicted the choice of the car and public transport. These findings are discussed in terms of having more sustainable and safer transportation choices.

Keywords: travel mode choice, face-to-face workers, COVID-19, Brazil, behavioral intention.

Elección del Transporte Durante la Pandemia de Covid-19: un Estudio Basado en la Teoría del Comportamiento Planificado

Resumen

Poco se sabe sobre lo que influyó en el comportamiento de movilidad en Brasil en relación con la COVID-19. Utilizando la Teoría del Comportamiento Planificado, el objetivo de este estudio es comprender cómo los brasileños eligieron qué modo de transporte utilizar durante este escenario. Una muestra de 404 personas, que trabajaban de manera presencial, participó en una encuesta en línea. Los resultados indicaron que: 1) el principal motivo para elegir el modo de transporte fue el ahorro de tiempo, seguido de la comodidad y el riesgo de contraer COVID-19; 2) hubo un aumento significativo en el uso de vehículos personales en comparación con el uso del transporte público al comienzo de la pandemia: 3) hubo actitudes positivas con los medios de transporte individuales como el automóvil; y 4) actitudes y normas subjetivas significativamente predicho la elección del coche ante el transporte público. Estas conclusiones se discuten en términos de una elección del medio de transporte más sostenible y seguro.

Palabras clave: elección de modo de viaje, trabajadores presenciales, COVID-19, Brasil, intención de comportamiento.

1. Introduction

In Brazil, the annual traffic fatality rate is alarming, with 19.7 deaths per 100,000 inhabitants (WHO, 2018). Most fatalities involve motorcycle users (36.7%) and car users (21.4%), whereas buses are considered the safest mode of transport (Brasil, 2020a). Modal choices can also significantly impact air pollution, another critical public health concern (Blount et al., 2017).

Measures that governments can adopt to improve air quality and public health include the development of safer and more accessible public transport systems, promoting walkability, and implementing mandatory inspections and emissions standards for vehicles (WHO, 2022). However, public transport in Brazil is often characterized by long waiting times, discomfort during commutes, and inadequate infrastructure for walking and cycling (Vasconcellos, 2018).

Recently, the use of public transport has been related to the risk of contracting COVID-19 reduction in its usage (Oliveira et al., 2020). Consequently, somecities have sought to become more bike-friendly, triggering the building of more infrastructure for cyclists (Nikitas et al., 2021) —which can also contribute to reduce harmful environmental effects (e.g., greenhouse gases).

Little is known, however, about what influences mobility behavior in Brazil and how a different context, such as the pandemic, might affect mobility choices. The aim of this study is to understand how workers in two large Brazilian cities choose which transport mode to use to get to work. In the following sections, we will provide the context in which the study was carried out, data on choice of transport modes as well as our rationale for using the Theory of Planned Behavior (TPB; Ajzen, 1991).

1.1. Context

This study focuses on two cities: Curitiba and São Paulo. Curitiba, located in the southern region of Brazil, was chosen due to its high-quality public transport system, which is considered exemplary by Brazilian standards (Vasconcellos, 2018). The city is recognized as the birthplace of the Bus Rapid Transit (BRT). This system was developed in the 1970s by a multidisciplinary team, inspired by other cities around the world, with the aim of optimizing public transport in Curitiba. BRT's main feature is dedicated bus lanes, of which the city now has 81 km (Duarte et al., 2016).

Improvements have continued over time. In 1992, for example, the city began operating the "Biarticulated Express Line Bus", which used the same structure as previously developed, but with greater passenger capacity (Prestes et al., 2022). Another improvement was the level boarding, for instance, access from passenger platforms to the bus floor (Duarte et al., 2016). The system has a network of feeder lines and is considered integrated, as passengers can change lines at bus terminals (22 interchange terminals) and pay only one fare, collected before boarding (Duarte et al., 2016).Following the implementation of BRT in Curitiba, the city gained recognition in the urban planning field for prioritizing public over private transport (Prestes et al., 2022). Several cities in Brazil (e.g., Rio de Janeiro, Goiânia, São Paulo; Faria, 2018) and around the world (e.g., Bogotá; Duarte et al., 2016) have replicated this model, adapting it to their socio-spatial differences. In Brazil, the BRT replication process was intensified in the mid-2000s (Faria, 2018).

São Paulo, located in southeastern Brazil, is the country's most populous city, with over 11 million residents —6.5 times the population of Curitiba (Brasil, 2022)— and is also one of the most globalized cities in the world. Unlike Curitiba, São Paulo's public transport system includes subways and trains in addition to buses (São Paulo, 2022b). Both cities have high car ownership rates, with approximately one car for every two residents (Brasil, 2020b). Excessive reliance on motorized vehicles has led to congestion, air pollution, and high crash rates, so governments need to rethink mobility policies (Oliveira & Silva, 2015). Understanding

how people choose their transport mode is essential for developing these policies.

1.2. Reasons for choosing the transport mode

Among the main factors considered when making the modal choice are time-saving (Delhomme & Gheorghiu, 2016; Maia et al., 2020), financial cost, health promotion (Maia et al., 2020; Useche et al., 2019), safety (in relation to traffic crashes or thefts/robberies that may occur on the way), comfort (Maia et al., 2020) and concern for the environment (Delhomme & Gheorghiu, 2016; Maia et al., 2020; Useche et al., 2019).

To encourage the adoption of environmentally friendly transport modes, urban infrastructure measures —such as bicycle lanes and parking— are critical (Yang et al., 2018). Electric vehicles also present a viable alternative, provided adequate charging stations are available (Chen et al., 2018).

Demographic factors can influence environmental attitudes. Women and older adults tend to exhibit more pro-environmental behaviors (Casaló & Escario, 2018; Domingues & Gonçalves, 2018). Women are more likely to use public transport (Vicente-Molina et al., 2018) and stop using their car for environmental reasons (López-Mosquera et al., 2015).

Recently, another factor may have influenced the choice of transport modes on a global level: the risk of contracting COVID-19. More than 705,000 Brazilians have died because of the pandemic (Brasil, 2023). Proportionally, more people died in Curitiba (4.37 per million; Curitiba, 2022) than in São Paulo (3.57 per million; São Paulo, 2022a). To contain the spread of the disease, social distancing was recommended (WHO, 2020).

Public transport usage declined during the pandemic, as individuals sought to avoid contact with other people and shared objects (Aaditya & Rahul, 2021; Jenelius & Cebecauer, 2020). For instance, daily public transport trips in Curitiba dropped: in 2019 there was an average of 1,331,610 passengers per day, while in 2020 there were 710,589 (Urbanização de Curitiba, 2022). To improve the attractiveness of this type of transport post-COVID-19, one option is fare-free public transport policies, which have been effective in Chinese cities (Dai et al., 2021). Public transport providers need to reduce passengers' anxiety and restore their confidence in it (Dong et al., 2021).

Conversely, active transport modes, such as cycling and e-scooters, have gained popularity during the pandemic (Dias et al., 2021; Fenu, 2021). A study carried out in Spain showed that most of the population agrees with expanding spaces for pedestrians and cyclists and would change their mode of transport to a more sustainable one if this reduced the spread of COVID-19 (Awad-Núñez et al., 2021). The pandemic has prompted many cities to rethink their transport systems, highlighting the need for innovative approaches to urban mobility (Vickerman, 2021). We present here our approach to how such "rethinking" can occur.

1.3. Theory of Planned Behavior

To understand the choice of travel modes during the pandemic, the present study is based on the Theory of Planned Behavior (TPB; Ajzen, 1991). According to this theory, a person's actions are guided by four key components:

- **Attitude,** shaped by the perceived consequences of a behavior and whether these consequences are evaluated positively or negatively.
- **Subjective norms,** generated by the expectations of other people, who are considered important (family, co-workers) regarding the behavior in question.
- **Perceived Behavioral Control** *(PBC),* determined by the existence of factors that may facilitate or hinder the execution of the behavior, such as skills, financial resources, or other necessary elements.
- **Intention**, which refers to the willingness or expectation to perform the behavior.

There are two types of subjective norms: injunctive norm, when there is an expectation or probability that important people would approve

or disapprove the behavior, and descriptive norm, when these important people perform the behavior or not (Fishbein & Ajzen, 2010). Bamberg et al. (2003) have provided support for using the TPB as a theoretical framework for studies on travel mode choice.

1.4. Hypotheses

According to the objective of this study and the existing literature in Traffic Psychology, four hypotheses were developed and tested:

H1: The pandemic can influence the choice of transport mode to the extent that: a) there was an increase in car use during the pandemic compared to before the pandemic (Aaditya & Rahul, 2021); b) participants who used public transport before the pandemic and who have changed their modal choice are more concerned about contracting COVID-19 compared to those who have not changed (Jenelius & Cebecauer, 2020).

H2: The reasons for choosing transport modes vary by gender, age, city, and the perceived freedom to choose. a) Curitiba residents consider the risk of contracting COVID-19 more significant than São Paulo residents, because proportionally more people in Curitiba died from this disease than in São Paulo (Curitiba, 2022). b) Females and older adults display more pro-environmental behavior when choosing transport modes compared to males and younger individuals (Casaló & Escario, 2018; Domingues & Gonçalves, 2018; López-Mosquera et al., 2015). c) Financial cost is a greater consideration for the mode of choice among users who do not feel they can freely choose either public or privately owned transport compared to those who do feel free to choose; on the other hand, "free" users (with a higher sense of freedom to choose) are more concerned about comfort than non-free commuters when choosing the mode of transport (Maia et al., 2020).

H3: In Brazil, individuals who exclusively use private transport have more positive attitudes toward these modes compared to those who rely solely on public transport (Vasconcellos, 2018).

H4: Attitudes and subjective norms can predict the use of public transport and cars for commuting to work (Ahmed et al., 2021; Nemme & White, 2010). In contrast, Perceived Behavioral Control may not exert a significant influence during the pandemic.

To test these hypotheses and understand how Brazilian adults chose their commuting modes during the COVID-19 pandemic (defined for this study as the period between July and November 2021), an online survey was conducted using a questionnaire based on the TPB framework (Ajzen, 1991).

2. Material and Methods

2.1. Participants

Participants had to meet the following eligibility criteria: 1) work in person (not remotely), 2) reside in Curitiba or São Paulo, and 3) be 18 years of age or older. The sample included 404 Brazilians. A sample size of 385 individuals was initially expected, based on a 5% margin of error and a 95% confidence level, considering a population of 6,904,053 workers in Curitiba and São Paulo (IBGE, 2022). Participants had an average age of 34.24 years (± 11.07 years). The mean distance traveled between home and work was 10.49 km (± 10.55 km): 9.48 km (± 8.83 km) for Curitiba residents and 12.39 km (± 13.00 km) for São Paulo residents. There were more participants working in the health sector (24.3%) than in any other sector.

In the questionnaire, participants were asked to self-declare their gender. The options were "male", "female" or "other". The "other" option was not chosen. Table 1 presents the main information about the participants.

2.2 Instruments

To prepare the questionnaire, Fishbein and Ajzen (2010) recommended administrating free-response questions to a small sample of people

Table 1.
Sample characteristics

Characteristics	n	%
Gender		
Male	145	35.9
Female	259	64.1
Education		
Middle	01	00.2
High School	122	30.2
Bachelor's degree	180	44.6
Master's or doctorate degree	101	25.0
Age		
18ª- 25	102	25.3
26 - 39	182	45.0
40 - 65	120	29.7
City		
Curitiba	261	64.6
São Paulo	143	35.4
Occupation		
Health (doctor, nurse, psychologist, dentist, etc.)	98	24.3
Education and research (all levels)	62	15.3
Services (lawyer, engineer, architect, etc.)	55	13.6
Administration and business	43	10.6
Public safety (police, fireman)	29	7.2
Commerce and sales	25	6.2
Other (technology, logistics, etc.)	92	22.8
Have driver's license		
Yes	339	83.9
No	65	16.1
Have a car or have access to a car		
Yes	293	72.5
No	46	11.4
No driving license	65	16.1
Home-work distance		
Up to 2 km	68	17.3
From 2.1 to 4 km	56	14.3
From 4.1 to 6 km	51	12.9
From 6.1 to 8 km	43	11.0
From 8.1 to 10 km	32	8.1
From 10.1 to 12 km	36	9.2
More than 12 km	107	27.2
Traffic jams on the way to work		
Intense	105	26.0
Moderate	182	45.0
No traffic jams	70	17.3
Depending on the day	47	11.6
Changed transport modes during pandemic		
Yes	106	26.2
No	298	73.8

COVID-19 Vaccination		
Complete	213	52.7
Incomplete	117	29.0
Not performed	74	18.3
***Contracted* COVID-19**		
Yes	102	25.2
No	302	74.8
Total	404	100

Note. [a] *Age of majority in Brazil.*

who are representative of the study population. Therefore, 33 preliminary interviews were conducted with workers by videoconference to collect beliefs about the choice of transport modes during the pandemic. From these, an anonymous questionnaire was developed and pre-tested.

The questionnaire comprised five sections with questions about: 1) work, routine (e.g., home-work distance) and transport modes used to go to work (at the time of data collection, that is to mean between July and November 2021); 2) TPB factors, including attitudes, subjective norms, perceived behavioral control and intention (when the pandemic ends); 3) changing transport modes during the pandemic and which modes were used before the pandemic started (e.g., "Have you changed the transport mode you were using in November 2019 (before the pandemic started)?"; 4) sociodemographic dimensions (gender, age, education level, city of residence); and 5) COVID-19 questions (vaccination and having contracted the disease). All scales used in the questionnaire were four-point scales. The decision to use even-numbered scales was intended to implement a "forced choice", requiring participants to take a position without the option of neutrality. All questions referred specifically to commuting on the home-work route.

The reliability indices of the final instrument were satisfactory. Cronbach's alpha (α) was 0.90, and McDonald's omega was 0.85.

2.2.1 TPB factors

a) Attitudes

Attitudes about transport modes were assessed based on three topics: 1) what people considered when choosing their transport mode (8 items), 2) perceived advantages and disadvantages of transport choice (13 items), 3) what encourages them to use the stated mode (9 items). For all attitude-related items, a "strongly disagree (1) - strongly agree (4)" scale was used, in which higher scores indicated more positive attitudes ($\alpha = 0.87$).

b) Subjective norms

Participants were first asked to identify which people were important to them, offering eight options: mother, father, husband/wife, brother/sister, boss, friends, son/daughter, and boyfriend/girlfriend. The question was phrased as: "My (mother)'s opinion is important when I choose the transport mode I use to go to work". If participant answered "Agree" or "Totally agree", the person was considered relevant.

The injunctive norm was assessed by asking, for each relevant person, "What is the probability that your (mother) believes that the transport mode(s) you currently use to go to work is the best option for you?" Responses were averaged (on a Likert scale) across all relevant individuals, with scores ranging from very unlikely (1) to very likely (4).

To assess descriptive norms, participants were asked about the transport mode(s) used by each relevant person: "What transport mode(s) does your (mother) use to go to work?" Responses were

categorized into three possibilities: the individual uses the same mode as the participant (2); uses a mode partially shared with the participant (1); or does not use the same mode (0). After that, for each participant, the average value obtained for relevant people was calculated. Thus, for example, if only the mother and father were considered relevant, and the participant used the same mode of transport as the mother —but different from the father— the calculation performed was: (2 + 0)/2 = 1. The sum of two values and the division by two was because only two people were relevant in the example.

*c) Perceived behavioral control (**PBC**)*

PBC was assessed through eight items (α = 0.72): 1) "For me, changing my routine and using another transport mode to go to work would be *very unlikely-very likely*" (1 item); 2) "For me, using another transport mode to go to work if necessary would be *very unlikely-very likely*" (1 item); 3) "My freedom to choose the transport mode I go to work *is very low-very high*" (1 item); and 4) "For me, changing my routine and using a bicycle (e-scooter/motorcycle/walk etc.) to go to work would be *very difficult-very easy*" (5 items).

d) Intention

To measure intention, participants were asked "After the pandemic is over, what transport mode(s) do you intend to use to go to work?". People could check more than one transport alternative.

2.3 Procedure

Data were collected between July and November of 2021. Due to the risk of COVID-19 contamination, data collection could not be conducted in person; thus, an online form had to be used. To access travel habits during the pandemic, participants had to work in person. However, many individuals were working remotely at the time. This situation led us to snowball non-probability convenience sampling procedure (e.g., Leighton et al., 2021; Shafi et al., 2023). Workers in the health and public safety sectors were contacted via social media and asked to participate in the study and to provide the mobile phone number (WhatsApp) of one or more people who could also complete the questionnaire according to the study criteria. Each new participant was asked to suggest another person.

In the education sector, emails were sent to all professors in charge of undergraduate courses at universities in Curitiba and São Paulo who had an institutional email address available on the Internet. The approximate time taken to complete the questionnaire was 20 minutes.

Data was analyzed using the Statistical Package for the Social Sciences (SPSS). Analyses included descriptive statistics (frequencies, means, and standard deviations), chi-square tests, One-Way ANOVA, and binary logistic regression analysis.

3. Results

This section has three topics: 1) descriptive analysis regarding the participants' transport habits before, during and after the pandemic, 2) reasons for choosing transport mode and demographic variables, and 3) TPB and prediction of choosing transport mode behavior.

3.1 Descriptive Analysis Regarding the Participants' Transport Habits

To better understand the transport habits and the influence of the pandemic on the population sampled, we considered for each transport mode the frequencies of use before (November 2019) and during the pandemic (July – November 2021) as well as anticipated use post-pandemic. Table 2 shows the frequency of use of each transport mode for a) people who have not changed their mode of transport (n = 298); and b) people who changed (n = 106) after the start of the pandemic. More than half of the participants were using individual transport modes, e.g., a personal car (n = 246, 60.9%) and app-based ride-hailing (e.g.,

Uber) or taxi (n = 103, 57.6%). Among people who changed their transport mode to go to work during the pandemic, 51.9% did so to reduce the risk of contact with coronavirus. In Figure 1 the transport modes are grouped into three categories (public transport, polluting individual transport and micro-mobility) and the frequency of use before, during and after the pandemic is compared among people who have changed their transport mode.

Regarding public transport use in each city, 33% of Curitiba residents used it before the pandemic, 13% during the pandemic, and 33% intended to use it after the pandemic. In São Paulo, 49% used it before the pandemic, 43% during the pandemic, and 52% intended to use it after the pandemic. In other words, people were more likely to use public transport in São Paulo than in Curitiba, possibly due to the limited options available in Curitiba (bus only).

Table 2.
Choice of mode of transport for commuting to work before, during (current at the time), and after the pandemic (intention), categorized by those who did or did not alter their choice

	a) No change in mode (n = 298)		b) Changed mode (n = 106)		
Mode of transport	**Before/ during the pandemic**	**Intention after the pandemic**	**Before the pandemic**	**During the pandemic**	**Intention after the pandemic**
Car	63.4%	66.4%	31.1%	53.8%	49.1%
Bus	23.2%	30.5%	61.3%	31.1%	50.0%
Ride-hailing/ Taxi	21.8%	21.1%	19.8%	35.8%	21.7%
Walk	12.1%	16.4%	17.9%	22.6%	29.2%
Subway	8.7%	10.7%	19.8%	11.3%	21.7%
Bicycle	5.4%	12.4%	8.5%	12.3%	17.0%
Motorcycle	5.4%	10.1%	3.8%	2.8%	4.7%
Company van	0.3%	0.3%	3.8%	5.7%	5.7%
Train	0.7%	0.3%	0.9%	0.9%	0.9%
E-scooter	0.3%	0.7%	0.9%	0.9%	1.9%
E-bike	0.3%	1.3%	0%	0%	2.8%

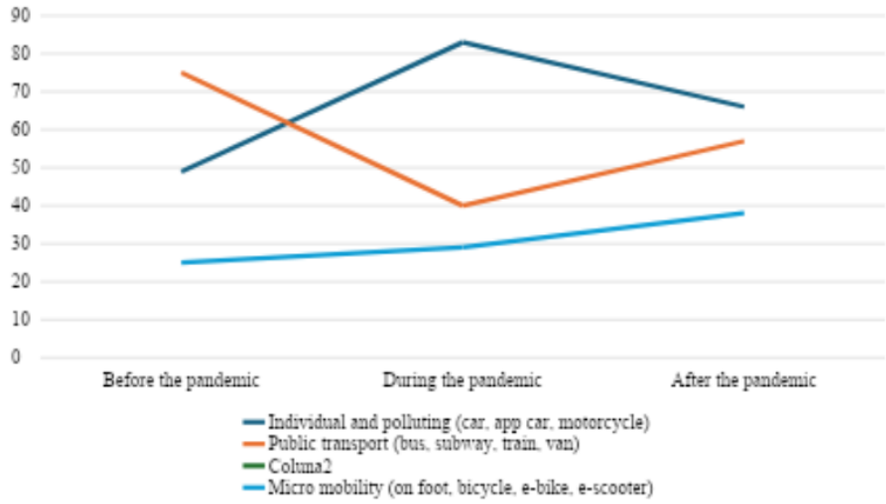
Notes. Questions 1) "Which mode of transport do you currently use to get to work (you can select more than one option)"; 2) "In November 2019, before the start of the pandemic, which mode of transport did you use to get to work (you can select more than one option)"; 3) "Once the pandemic is over, which mode of transport do you plan to use to get to work? (you can select more than one option)".

A chi-square test of independence (2x2) was carried out between using a car before the pandemic (2019, yes or no) and using a car during the pandemic (2021, yes or no). A significant association was found between using a car (χ^2 (1) = 205.17, p < 0.001; ϕ = 0.72before and during the pandemic (hypothesis 1a). Indeed, there was an increase in car use during the pandemic compared to before the pandemic.

Moreover, the transport modes perceived as the riskiest for contracting COVID-19 by the total sample were public ones: bus (M = 3.78, SD = 0.49) and subway (M = 3.77, SD = 5.34).

Figure 1

Participants who changed transport modes (n = 106): use of individual and polluting transport modes, public transport, and micro-mobility before, during and after the pandemic (intention)



The car was considered the least risky (M = 1.51, SD = 0.70). The car was also considered the most comfortable mode (M = 3.70, SD = 0.57) and the bus was rated the least comfortable (M = 1.92, SD = 0.70). Thus, the car was seen as the most comfortable and best mode for preventing COVID-19, and the bus the worst option in terms of prevention and comfort. Regarding intention for the future, a chi-square test of independence (2x2) was carried out using some sustainable transport modes, including public transport, and non-CO2-emitting individual transport (walking, bicycle, e-bicycle, e-scooter), during the pandemic (yes or no) and after the pandemic (yes or no). The results of an association (χ^2 (1) = 192.08, $p < 0.001$; $\phi = 0.69$), showed greater intention to use a sustainable mode of transport in the future. The odds ratio showed that after the end of the pandemic, people were 1.43 times more likely (intention) to use a sustainable mode than during the pandemic.

3.2 Reasons for Choosing Transport Modes and Demographic Variables

To assess what the participants considered when choosing transport modes during the pandemic, a set of eight possible reasons was given (Table 3). For the total sample, the three most relevant reasons for choosing transport modes were time-saving, comfort and avoiding the risk of contracting COVID-19. The risk of a traffic crash and environmental preservation were among the least considered reasons.

Only participants who used public transport before the beginning of the pandemic were selected (n = 162). A one-way ANOVA was used to assess whether there was a statistically significant difference in how these participants considered the fear of contracting COVID-19 between those who had changed (n = 75; mean = 3.6; SD = 0.7) or had not changed (n = 87; mean = 2.7; SD = 0.9) their mode of commuting. There were differences between the groups [$F(1, 161) = 44.66$, $p < 0.001$] (hypothesis 1b). The effect size was est. $\omega^2 = 0.21$.

Furthermore, to dig deeper into the reasons for choosing a particular mode over another, a one-way ANOVA was performed to check whether there were statistically significant differences between the groups (e.g., age, gender, city, and freedom for choosing the mode) in relation to the reasons for choosing the transport mode. The analyses were carried out in accordance with hypothesis 2. Table 4 presents only statistically significant

Table 3.
Reasons for choosing the transport mode (during the pandemic) for the total Curitiba and São Paulo sample

Possible reasons for choosing the transport mode	M[a] and SD - total sample	M and SD - Curitiba sample	M and SD - São Paulo sample
Time-saving	3.55 (0.65)	3.56 (0.65)	3.54 (0.64)
Comfort	3.22 (0.82)	3.25 (0.83)	3.17 (0.81)
Risk of contracting COVID-19	3.17 (0.92)	3.27 (0.90)	2.98 (0.95)
Risk of robbery or theft	3.07 (0.92)	3.08 (0.92)	3.06 (0.94)
Financial cost	3.02 (0.94)	2.97 (0.96)	3.11 (0.91)
Risk of sexual harassment	2.61 (1.06)	2.72 (1.05)	2.41 (1.07)
Risk of a crash	2.49 (0.96)	2.47 (0.93)	2.54 (1.02)
Environmental preservation	2.41 (0.85)	2.38 (0.82)	2.48 (0.90)

Note. [a] Strongly disagree (1) – strongly agree (4).

results; each line will be commented on in detail after the presentation of the table.

People from Curitiba considered the COVID-19 risk more (M = 3.27; SD = 0.89) than people from São Paulo (M = 2.98; SD = 0.95) (hypothesis 2a). Interestingly, there was no statistically significant difference between the three age groups and how much the person considered the preservation of the environment when choosing the mode (hypothesis 2b). However, females were significantly more concerned about the environment (M = 2.48; SD = 0.78) than males (M = 2.29; SD = 0.94).

Regarding the freedom to choose the mode of transport ("I feel free to choose the transport mode I use to go to work"), most participants (n = 323, 80%) declared that they felt free to make such a choice. Interestingly, participants reporting less freedom to make the choice of mode were significantly more concerned about financial cost than those with higher reported freedom (see Table 4). Furthermore, financial cost (M = 3.3; SD = 0.8) was the most considered reason in this group. On the other hand, participants who reported feeling free to make the choice of mode were significantly more concerned about comfort (M = 3.3; SD = 0.8) than those not reporting such freedom of choice (M = 2.7; SD = 0.9) (hypothesis 2c).

When choosing their transport mode, older participants were more inclined to consider the risk of contracting COVID-19, timesaving, comfort, and lower financial cost (see Table 4). The Bonferroni post-hoc test showed that, in all cases, the significant differences were between the "18 to 25-year-old" and "26 to 39-year-old" groups and between the "18 to 25-year-old" and "40-year-old and over" groups. The means and

Table 4.
Comparison between groups (age, gender, city, etc.) on the reasons for choosing transport mode

Dependent variable	Independent variable	Df1/df2	F	p	Effect size est.ω^2
COVID-19 risk	City	1/403	9.53	.002	0.02
Environmental preservation	Gender	1/403	4.67	.031	0.01
Financial cost	Free to choose[b]	1/146.96	12.441[a]	.001	0.03
Comfort	Free to choose[b]	1/106.82	30.221[a]	.000	0.07
COVID-19 risk	Age groups	2/402	4.63	.010	0.02
Time-saving	Age groups	2/402	6.02	.002	0.03
Comfort	Age groups	2/402	12.22	.000	0.05
Financial cost	Age groups	2/402	12.22	.000	0.05

Notes. aWelch's F/ bootstrapping was performed (1000 re-samplings; 95% ci bca).

[b]Feel free to choose the mode of transport (yes or no).

standard deviations for each group in relation to each of these reasons are presented in Table 5.

3.3 TPB Explaining and Predicting Travel Mode Choice Behavior

The descriptive statistics of each TPB factor are described in Table 6 (to verify how each factor was calculated, see 2.1.1). In general, people had a more positive than negative attitude about the transport mode they used and a low perceived behavioral control. Regarding subjective norms, people tended to use some transport modes in common with others deemed important to them and believe that those significant others supported their choices of transport modes.

A one-way ANOVA was performed to compare the TPB results according to gender, city, and age groups (Table 7). In a statistically significant way, people from Curitiba, and those aged over 40, had a more favorable attitude toward their chosen transport modes and used transport modes similar to those deemed important to them more often than people from São Paulo and those aged 26 to 39. Males had a higher PBC than females.

Table 5.
Reasons for choosing the transport mode with significant difference between means of age groups

Reasons for choosing	18-25 years	26-39 years	40 years and over
Time-saving	M= 3.36; SD= 0.73	M= 3.59; SD= 0.63	M= 3.65; SD= 0.56
Comfort	M= 2.90; SD= 0.89	M= 3.26; SD= 0.81	M= 3.42; SD= 0.72
COVID-19 risk	M= 2.93; SD= 0.95	M= 3.24; SD= 0.90	M= 3.27; SD= 0.91
Financial cost	M= 3.37; SD= 0.86	M= 2.99; SD= 0.92	M= 2.77; SD= 0.97

Table 6.
Descriptive statistics of the TPB factor

	n	Median	Mode	M	SD
Attitude*	404	2.98	3.00	2.934	0.415
Injunctive norms*	404	4.00	4.00	3.367	0.755
Descriptive norms**	247	1.00	1.00	1.042	0.703
Perceived behavioral control*	404	2.00	1.75	2.135	0.569

Notes. * Strongly disagree (1) – strongly agree (4).

** Does not use the same transport mode (0) - uses the same transport mode(s) (2).

Table 7.
Comparison between TPB factors between groups

	Gender				City				Age			
	df1/df2	**F**	**p**	**est.ω^2**	**df1/df2**	**F**	**p**	**est.ω^2**	**df1/df2**	**F**	**p**	**est.ω^2**
ATT[a]	-	-	-	-	1/403	7.29	.007	0.02	2/402	9.30	.000	0.04
DN[b]	-	-	-	-	1/246	3.96	.048	0.14	2/246	4.78	.009	0.03
PBC[c]	1/403	24.94	.000	0.06	-	-	-	-	-	-	-	-

Notes. [a]ATT = *Attitude.*

[b]DN = *Descriptive norms.*

[c]PBC = *Perceived behavioral control.*

- not statistically significant.

To examine whether there were significant differences in the attitudes of individuals using private and public transport modes (Hypothesis 3), a one-way ANOVA was performed, using bootstrapping procedures (1,000 re-samplings; 95% CI BCa) and Welch's correction. The ANOVA results showed that there were differences between the groups [Welch's $F(1,75.55) = 143.804$, $p \leq .001$]: individuals who used private transport had more positive attitudes ($M = 3.07$, $SD = 0.33$) toward their chosen mode of transport than those who used public transport ($M = 2.43$, $SD = 0.37$). The effect size was moderate (est. $\omega^2 = 0.30$). To understand to what extent TPB factors can explain the choice of public and individual transport during the pandemic (Hypothesis 4), a binary logistic regression was performed. Nagelkerke's R^2 estimates were used. Each block was added using the Enter method. This regression examined the extent to which gender, age (continuous variable), education level, city, distance between home and work (km), perceived risk of contracting COVID-19, and financial cost were predictors of 1) "(Use of) Car" ($n = 237$) and/or 2) "(Use of) Public transport": choosing public or individual transport ($n = 200$).

In Table 8, each column indicates the accumulated R2, according to the inclusion of the new block of variables (lines). In Table 9, each column indicates the beta and p values of the mode (car/public transport) selected (VIII).

In this model, city, financial cost, attitudes, and descriptive norms were significant predictors of public transport use. The introduction of the TPB factors in the model led to a significant increase in the determination coefficient ($R2 = 0.753$, $R2_{change} = 0.270$). The greatest increase occurred with the introduction of the variable attitudes. The only difference for the prediction of car use was that age was also significant and the greatest increase occurred with the introduction of the subjective norms.

Table 8.
R^2 when predicting the choice of car and public transport to commute during the pandemic

Variables included	Car[a] (n = 237)	Public Transport[b] (n = 200)
I (sociodemographic data: gender, age, education level)	0.130	0.280
II (city)	0.211	0.372
III (home-work distance)	0.213	0.411
IV (COVID-19)	0.260	0.445
V (financial cost)	0.302	0.483
VI (attitude)	0.368	0.712
VII (perceived behavioral control)	0.373	0.725
VIII (subjective norms: injunctive norms, descriptive norms)	0.602	0.753

Notes. [a] Use of a car (even if other modes are used). Note: 9 participants who use cars were excluded from the analysis due to missing data.

[b] Use of the bus, subway, or train without using individual modes (cars, ride-hailing apps service/taxis, walking, bicycles, motorcycles, e-bikes, e-scooters). When people used more than one type of mode (n = 63) or used a company van (n = 7) they were not considered.

Table 9.
Beta and p values of the mode when predicting the choice of car and/or public transport

Variables included (per regression block)	Car[a]		Public transport[b]	
	Beta	p	Beta	p
Gender[c] (I)	0.665	.116	1.486	.085
Age (I)	-0.064	.012	-0.053	.303
Education level (I)	0.107	.674	-0.645	.219
City[d] (II)	1.330	.002	1.980	.013
Home-work distance (III)	-0.014	.417	0.029	.301
COVID-19 (IV)	-0.401	.110	0.096	.816
Financial cost (V)	0.483	.060	1.587	.006
Attitude (VI)	-1.193	.046	-5.677	.000
Perceived behavioral control (VII)	0.043	.903	-1.115	.074

Injunctive norms (VIII)	-0.405	.110	-0.033	.933
Descriptive norms (VIII)	-2.367	.000	-1.318	.026

Note. [a] 1 = use of a car; 2 = no use of a car.

[b] 1 = only uses individual transport; 2 = only uses public transport.

[c] 1 = male; 2 = female.

[d] 1 = Curitiba; 2 = São Paulo.

Table 9 shows that individuals who used cars were most likely from Curitiba and had higher averages in age, attitudes (more positive), and descriptive norms. Individuals who exclusively used public transport were most likely from São Paulo and had higher averages in financial cost consideration, attitudes, and descriptive norms. Additionally, a greater home-work distance increased the likelihood of using public transport, considering the Brazilian socio-economic context.

Given the statistically significant differences between gender and city groups in relation to TPB factors (as shown in Table 7), the same model was applied to specific groups. The R^2 was higher when selecting only females (R^2 for predicting car use = 0.68; R^2 for predicting public transport use = 0.85) and only individuals from Curitiba (R^2 for predicting car use = 0.74; R^2 for predicting public transport use = 0.83).

4. Discussion and Conclusions

This study aimed to understand the choice of transport modes for commuting to work during the COVID-19 pandemic in Brazil. The results confirmed nearly all proposed hypotheses (except Hypothesis 2b) and are consistent with the scientific literature. First, we discuss the impact of the pandemic on the choice of transport mode choices (H1) and the reasons for these choices concerning gender, age, city, and freedom of choice (H2). Second, we examine participants' attitudes toward private and public transport modes (H3) and the TPB factors that predicted mobility choices during the pandemic (H4). Finally, we address the study's limitations and explore how our findings could inform mobility changes in Brazil and beyond.

The primary reason for transport mode selection was time-saving, followed by comfort and the risk of contracting COVID-19. Environmental preservation was among the least considered reasons. The low concern for environmental preservation could be related to the study being carried out during the pandemic, when the focus was on the preservation of life. Indeed, during the pandemic, press coverage focused its attention on cases of infection, deaths, and hospital capacity, not highlighting environmental problems.

Results indicated a preference for private transport modes, mainly the car. As stated in Hypothesis 1a, there was a significant increase in car use during the pandemic, consistent with previous studies (Aaditya & Rahul, 2021; Jenelius & Cebecauer, 2020). Given that Curitiba and São Paulo already had approximately one car per two residents in 2020 (Brasil, 2020b), this increase could exacerbate traffic congestion and air pollution (Guimarães et al., 2021).

Among individuals who used public transport in 2019, fear of contracting COVID-19 was an important variable for mode change, corroborating hypothesis 1b: public transport users who had changed transportation modes since the beginning of the pandemic were significantly more concerned about the risk of contracting COVID-19. Measures are needed to enable these people to use this transport again in the post-pandemic period, such as a free-fare public transport policy (Dai et al., 2021).

Moreover, older people were more concerned about the risk of contracting COVID-19 than younger people. Although this result is consistent with the literature on risk-taking, which shows that young adults take more risks than older people (Steinberg, 2007), one can argue that the high mortality rate of COVID-19 among the elderly (Brasil, 2022) represents a reasonable cause of older people's concern than just risk aversion.

Furthermore, the perceived risk was higher in Curitiba because the mortality rate was higher, confirming hypothesis 2a.

Regarding environmental concern, our study partially confirmed hypothesis 2b, which stipulated that females and older people would care more about it (e.g., Casaló & Escario, 2018). Contrary to our expectations, age had no relationship to how much the preservation of the environment was considered when choosing mode. However, gender showed a significant difference, partially confirming hypothesis 2b: women had a higher score than men on how much they considered the environment in such a choice (Vicente-Molina et al., 2018).

Financial cost was more important among people with low freedom of choice while comfort was the main factor for people with high freedom of choice, confirming hypothesis 2c. These data agree with Maia et al. (2020), in which participants who could pay more for transportation tended to use a private vehicle because it was considered safer and more comfortable, whereas low-income participants needed to use public transport.

In addition, in our study bus was considered uncomfortable (Vasconcellos, 2018) and the riskiest transport mode for contracting COVID-19 (Oliveira et al., 2020). It is, therefore, unsurprising that people who use individual transport modes had significantly more positive attitudes about the transport modes they use than people who use public transport (which confirms the third hypothesis).

Additionally, attitudes and descriptive norms were significant predictors of cars and public transport use. Our model was able to predict 60% and 75% of the result, respectively. This result is in line with the study by Ahmed et al. (2021). As pointed out by both studies, perceived behavioral control was not a significant predictor for cars and public transport choice. Attitudes had the strongest impact on the choice of public or private transport. When making a choice for cars, subjective norms had the most impact. In other words, the transport modes used by the participants' "most important people" had an impact on their choice of the car.

These findings provide valuable insights for interventions promoting sustainable transport and reducing car dependency. Such interventions should involve local authorities as suggested by Bamberg et al. (2021). Indeed, our data suggest that there is a need for more efforts to make the use of buses more attractive and more biosafe, and such information may help inform public policies. Furthermore, if time-saving and comfort are two important aspects for Brazilians when choosing their transport modes, it is important that public transport becomes more agile and comfortable (it would seem plausible that such factors are by no means limited to the Brazilian perspective). By increasing the bus fleet, for example, cities could reduce waiting times and people would be more likely to make their journeys sitting down, in more comfort. Since public transport is the only option for a large portion of the population, buses should have physical barriers between passengers, open windows, and the possibility of social distancing to avoid contamination with viruses.

Although TPB is not a behavior change theory, it serves as a foundation for interventions. Thus, campaigns can aim to improve the population's attitude toward public transport and use the idea of family and friends — shown in our results to be significant factors — to influence people to choose safe and sustainable transport modes. Moreover, the present study showed low perceived behavioral control among the participants for the choice of transport mode. Interventions can be designed to make it clear to people that they can make more sustainable and yet affordable choices. Such campaigns may focus primarily on women, who have significantly lower PBC than men.

The present study also showed how attitudes and lifestyle changes born of the pandemic may shape commuting choices going forward. Our participants stated their intention to use more sustainable transport modes in the future (when the pandemic was over) compared to what they

used during the pandemic. Indeed, high numbers of cars can affect the population's quality of life (Guimarães et al., 2021); thus, public transport could have been replaced by active modes during the pandemic. However, as pointed out by Vasconcellos (2018), the Brazilian road structure is not ideal and must be improved to be made safer. Better quality sidewalks, greater extension of cycle lanes, and proper signs for pedestrians and micro-mobility users could help increase the use of this kind of transport mode. It is believed that if people saw these changes, they might be more inclined to use individual non-motorized transport modes in the future and help reduce congestion and greenhouse gases. However, it is important to highlight the need to focus on road safety by promoting the use of bicycles and e-scooters, emphasizing the correct use of infrastructure and protective equipment.

Our study has two main limitations: 1) the high level of education of the sample (69.6% had at least a bachelor's degree), reflecting a higher socioeconomic level that is not the reality in Brazil and 2) the way in which the sample was selected. Indeed, it was not possible to carry out a random selection of participants. On the positive side, with a higher level of education, our participants had easier access to the online questionnaire (method chosen because of COVID-19 transmission).

In conclusion, our study aligns with the Sustainable Development Goals, such as "good health and well-being" and "sustainable cities and communities" (SDGs; United Nations, 2015) — presents valuable data for the implementation of public policies aimed at sustainability and safety. The results of the study may also find use in the support of public campaigns, in particular drawing on findings about the relevance of attitudes and subjective norms in the choice of transport mode. New variants of the coronavirus or new pandemics may occur in the future. Therefore, it is important that public policies are designed to help people to be safer on public transport or to migrate to transport modes that are healthier for society and the environment in general.

References

Aaditya, B., & Rahul, T. M. (2021). Psychological impacts of COVID-19 pandemic on the mode choice behaviour: A hybrid choice modelling approach. *Transport Policy, 108*, 47-58. https://doi.org/10.1016/j.tranpol.2021.05.003

Ahmed, F., Catchpole, J., & Edirisinghe, T. (2021). Understanding young commuters' mode choice decision to use private car or public transport from an Extended Theory of Planned Behavior. *Transportation Research Record, 2675*(3), 200–211. https://doi.org/10.1177/03611981209679 36

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, *50*, 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Awad-Núñez, S., Julio, R., Moya-Gómez, B., Gomez, J., & González, J. S. (2021). Acceptability of sustainable mobility policies under a post-COVID-19 scenario. Evidence from Spain. *Transport Policy, 106*, 205–214. https://doi.org/10.1016/j.tranpol.2021.04.010

Bamberg, S., Ajzen, I., & Schmidt, P. (2003). Choice of Travel Mode in the Theory of Planned Behavior: The roles of past behavior, habit, and reasoned action. *Basic and Applied Social Psychology, 25*(3), 175–187. https://doi.org/10.1207/S15324834basp2503_01

Bamberg, S., Ajzen, I., & Schmidt, P. (2021). Travel mode choice as reasoned action. *International Encyclopedia of Transportation, 5*, 63–79. https://doi.org/10.1016/B978-0-08-102671-7.10408-7

Blount, R. J., Pascopella, L., Catanzaro, D. G., Barry, P. M., English, P. B., Segal, M. R., Flood, J., Meltzer, D., Jones, B., Balmes, J., & Nahid, P. (2017). Traffic-related air pollution and all-cause mortality during tuberculosis treatment in California. *Environmental Health Perspectives*, *125*(9), 1-11. https://doi.org/10.1289/ehp1699

Brasil - Ministério da Saúde. (2020a). *Óbitos por causas externas - Dados preliminares*. Recuperado de http://tabnet.datasus.gov.br/cgi/deftohtm.exe?sim/cnv/ext10uf.def

Brasil. (2020b). *Frota de veículos 2020 – Frota Nacional (dezembro 2020)*. Recuperado de https://www.gov.br/infraestrutura/pt-br/assuntos/transito/conteudo-denatran/frota-de-veiculos-2020

Brasil - Instituto Brasileiro de Geografica e Estatística [IBGE]. (2022). *São Paulo*. Recuperado de https://cidades.ibge.gov.br/brasil/sp/sao-paulo/panorama

Brasil. (2023). *Painel coronavírus*. Retrieved October 17, 2023, from https://covid.saude.gov.br/

Casaló, L. V., & Escario, J. (2018). Heterogeneity in the association between environmental attitudes and pro-environmental behavior: A multilevel regression approach. *Journal of Cleaner Production, 175*, 155–163. https://doi.org/10.1016/j.jclepro.2017.11.237

Chen, Y., Cheng, C., Li, S., & Yu, C. (2018). Location optimization for multiple types of charging stations for electric scooters. *Applied Soft Computing*, *67*, 519–528. https://doi.org/10.1016/j.asoc.2018.02.038

Curitiba. (2022). *Curitiba contra coronavírus - Capitais (> 1M hab)*. Recuperado de https://coronavirus.curitiba.pr.gov.br/painelcovid/

Dai, J., Liu, Z., & Li, R. (2021). Improving the subway attraction for the post-COVID-19 era: The role of free-fare public transport policy. *Transport Policy*, *103*, 21-30. https://doi.org/10.1016/j.tranpol.2021.01.007

Delhomme, P., & Gheorghiu, A. (2016). Comparing French carpoolers and non-carpoolers: Which factors contribute the most to carpooling? *Transportation Research Part D: Transport and Environment*, *42*, 1-15. https://doi.org/10.1016/j.trd.2015.10.014

Dias, G., Arsenio, E., & Ribeiro, P. (2021). The role of shared e-scooter systems in urban sustainability and resilience during the Covid-19 mobility restrictions. *Sustainability*, *13*(13), 1-19. https://doi.org/10.3390/su13137084

Domingues, R. B., & Gonçalves, G. (2018). Assessing environmental attitudes in Portugal using a new short version of the Environmental Attitudes Inventory. *Current Psychology*, *39*, 629-639. https://doi.org/10.1007/s12144-018-9786-x

Dong, H., Ma, S., Jia, N., & Tian, J. (2021). Understanding public transport satisfaction in post COVID-19 pandemic. *Transport Policy*, *101*, 81-88. https://doi.org/10.1016/j.tranpol.2020.12.004

Duarte, F., Gadda, T., Luna, C. A. M., & Souza, F. T. (2016). What to expect from the future leaders of Bogotá and Curitiba in terms of public transport: Opinions and practices among university students. *Transportation Research Part F: Traffic Psychology and Behaviour, 38*, 7-21. https://doi.org/10.1016/j.trf.2015.12.013

Faria, F. R. F. (2018). Políticas federais de transporte público: a difusão e implantação do sistema BRT (Bus Rapid Transit) em cidades brasileiras. *Revista Caminhos de Geografia, 19*(67), 261-373. http://dx.doi.org/10.14393/rcg196724

Fenu, N. (2021). Bicycle and urban design. A lesson from Covid-19. TeMA - Journal of Land Use, *Mobility and Environment, 14*(1), 69-92. https://doi.org/10.6092/1970-9870/7716

Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. Psychology Press.

Galatoulas, N., Genikomsakis, K. N., & Ioakimidis, C. S. (2018). Analysis of potential demand and costs for the business development of an electric vehicle sharing service. *Sustainable Cities and Society*, *42*, 148–161. https://doi.org/10.1016/j.scs.2018.07.008

Guimarães, B. R., Pasqualetto, A., & Cunha, J. P. S. (2021). A vital necessidade da mobilidade urbana nas cidades brasileiras. *Revista Nacional de Gerenciamento de Cidades*, *9*(69), 122–134. https://doi.org/10.17271/23188472969202127 84

Jenelius, E., & Cebecauer, M. (2020). Impacts of COVID-19 on public transport ridership in Sweden: Analysis of ticket validations, sales and passenger counts. *Transportation Research Interdisciplinary Perspectives*, *8*, 1-8. https://doi.org/10.1016/j.trip.2020.100242

Leighton, K., Kardong-Edgren, S., & Schneidereith, T. (2021). Using social media and snowball sampling as an alternative recruitment strategy for research. *Clinical Simulation in Nursing, 55*, 37-42. https://doi.org/10.1016/j.ecns.2021.03.006

López-Mosquera, N., Lera-López, F., & Sánchezc, M. (2015). Key factors to explain recycling, car use and environmentally responsible purchase behaviors: a comparative perspective. *Resources, Conservation and Recycling*, *99*, 29-39. https://doi.org/10.1016/j.resconrec.2015.03.007

Maia, A. G., de Carvalho, C. S., Venâncio, L. C., & Dini, E. D. (2020). The motives behind transport mode choice: a study with university students in Brazil. *Revista Ambiente & Sociedade*, *23*, 1-20. https://doi.org/10.1590/1809-4422asoc20170188r4vu2020L5ao

Nemme, H. E., & White, K. M. (2010). Texting while driving: Psychosocial influences on young people's texting intentions and behaviour. *Accident Analysis & Prevention*, *42*(4), 1257-1265. https://doi.org/10.1016/j.aap.2010.01.019

Nikitas, A., Tsigdinos, S., Karolemeas, C. Kourmpa, E., & Bakogiannis, E. (2021). Cycling in the era of COVID-19: Lessons learned and best practice policy recommendations for a more bike-centric future. *Sustainability*, *13*(9), 1-25. https://doi.org/10.3390/su13094620

Oliveira, W. K., Duarte, E., França, G. V. A., & Garcia, L. P. (2020). Como o Brasil pode deter a COVID-19 [How Brazil can stop COVID-19]. *Epidemiologia e Serviços de Saúde*, *29*(2). https://doi.org/10.5123/s1679-49742020000200023

Oliveira, G. M., & Silva, A. N. R. (2015). Desafios e perspectivas para avaliação e melhoria da mobilidade urbana sustentável: um estudo comparativo de municípios brasileiros. *Transportes*, *23*, 59–68. https://doi.org/10.4237/transportes.v23i1.768

Prestes, O. M., Ultramari, C., & Caetano, F. D. (2022). Public transport innovation and transfer of BRT ideas: Curitiba, Brazil as a reference model. *Case Studies on Transport Policy, 10*(1), 700-709. https://doi.org/10.1016/j.cstp.2022.01.031

São Paulo. (2022a). *Cidade de São Paulo – Boletim diário COVID-19*. Recuperado do https://www.prefeitura.sp.gov.br/cidade/secretarias/upload/saude/20220913_boletim_diario_covid19.pdf

São Paulo. (2022b). *Estrutura*. Recuperado do https://www.capital.sp.gov.br/cidadao/transportes/transporte-publico/

Shafi, R., Delbosc, A., & Rose, G. (2023). The role of culture and evolving attitudes in travel behaviour assimilation among south Asian immigrants in Melbourne, Australia. *Transportation, 50*, 1261-1287. https://doi.org/10.1007/s11116-022-10277-w

Steinberg, L. (2007). Risk taking in adolescence: New perspectives from brain and behavioral science. *Current Directions in Psychological Science*, *16*, 55–9. https://doi.org/10.1111/j.1467-8721.2007.00475.x

United Nations. (2015). *Sustainable Development - The 17 Goals*. Retrieved from https://sdgs.un.org/goals#icons

Urbanização de Curitiba. (2022). *Transporte*. Retrieved from https://www.urbs.curitiba.pr.gov.br/transporte

Useche, S. A., Montoro, L., Sanmartin, J., & Alonso, F. (2019). Healthy but risky: A descriptive study on cyclists' encouraging and discouraging factors for using bicycles, habits and safety outcomes. *Transportation Research Part F: Traffic Psychology and Behaviour*, *62*, 587–598. https://doi.org/10.1016/j.trf.2019.02.014

Vasconcellos, E. A. (2018). Urban transport policies in Brazil: The creation of a discriminatory mobility system. *Journal of Transport Geography*, *67*, 85–91. http://dx.doi.org/10.1016/j.jtrangeo.2017.08.014

Vicente-Molina, M. A., Fernandez-Sainz, A., & Izagirre-Olaizola, J. (2018). Does gender make a difference in pro-environmental behavior? The case of the Basque Country University students. *Journal of Cleaner Production*, *176*, 89–98. https://doi.org/10.1016/j.jclepro.2017.12.079

Vickerman, R. (2021). Will Covid-19 put the public back in public transport? A UK perspective. *Transport Policy*, *103*, 95–102. https://doi.org/10.1016/j.tranpol.2021.01.005

World Health Organization [WHO]. (2018). *Global status report on road safety 2018*. Retrieved from https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/

World Health Organization [WHO]. (2020). *Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19)*. Retrieved from https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf?sfvrsn=fce87f4e_2

World Health Organization [WHO]. (2022). *Novos dados da OMS revelam que bilhões de pessoas ainda respiram ar insalubre*. Retrieved from https://www.paho.org/pt/noticias/4-4-2022-novos-dados-da-oms-revelam-que-bilhoes-pessoas-ainda-respiram-

ar-insalubre#:~:text=As%20%C3%baltimas%20Diretrizes%20de%20Qualidade,24%20horas%3A%2045%20%C2%B5g%2Fm3

Yang, Y., Wang, C., Liu, W., & Zhou, P. (2018). Understanding the determinants of travel mode choice of residents and its carbon mitigation potential. *Energy Policy*, *115*, 486–493. https://doi.org/10.1016/j.enpol.2018.01.033

doi: https://doi.org/10.15446/rcp.v34n2.113988

A Systematic Review of Randomized Controlled Trials for Behavioral Interventions Targeting Alcohol and Cannabis Use in Young Adults

Angela J Pereira-Morales
Doctorado en Salud Pública, Facultad de Medicina, Universidad Nacional de Colombia

María Fernanda Redondo Mayorga
Facultad de Ciencias Humanas, Universidad Nacional de Colombia

Felipe Ramírez-Cortázar
Facultad de Ciencias Humanas, Universidad Nacional de Colombia
Universidad de Cundinamarca

Javier Hernando Eslava-Schmalbach
Facultad de Medicina, Universidad Nacional de Colombia

How to cite this article: Pereira-Morales, A. J., Redondo Mayorga, M. F., Ramírez-Cortázar, F. & Eslava-Schmalbach , J. H. (2025). A Systematic Literature Review of Randomized Controlled Trials for Behavioral. Interventions on Alcohol and Cannabis Use. *Revista Colombiana de Psicología*, *34*(2), 59-77. https://doi.org/10.15446/rcp.v34n2.113988

Correspondence: Angela J Pereira-Morales (https://orcid.org/0000-0003-2151-0424). Email: apereira@unal.edu.co

SCIENTIFIC RESEARCH ARTICLE

RECEIVED: APRIL 18TH, 2024 - ACCEPTED: MAY 8TH, 2024

A Systematic Review of Randomized Controlled Trials for Behavioral Interventions Targeting Alcohol and Cannabis Use in Young Adults

Abstract

There is a wide range of behavioral interventions based on different theoretical approaches; some have shown some level of effectiveness in reducing cannabis and alcohol use rates, but few have been tested using a Randomized Controlled Trial (RCT) design. We searched MEDLINE, Embase, APA PSYCNET, and the Cochrane Central Register of Controlled Trials for RCTs published in English that examined behavioral interventions for cannabis and alcohol consumption. We screened 207 abstracts and identified 11 RCTs involving 4,211 young adults. Interventions with higher retention rates and statistically significant results were delivered in an online format and they were focused mostly on cannabis use reduction. Only the combination of motivational interviewing and behavioral economics showed significant results after follow-up, with a high retention rate. Integrating behavioral interventions embedded into public policies at institutional, local, or national levels could lead to more positive outcomes and long-term effectiveness. Applying these evidence-based interventions in public policy strategies could enhance long-term health outcomes and provide scalable solutions to address substance use among young adults.

Keywords: Alcohol Use; Cannabis Use; Young Adults; Behavioral Intervention; Randomized Controlled Trial.

Revisión Sistemática de Ensayos Aleatorios Controlados sobre Intervenciones Conductuales Dirigidas al Consumo de Alcohol y Cannabis en Adultos Jóvenes

Resumen

Existe una amplia gama de intervenciones conductuales basadas en diferentes enfoques teóricos; algunas han mostrado cierto nivel de eficacia en la reducción de las tasas de consumo de cannabis y alcohol, pero pocas se han probado mediante un diseño de Ensayo Controlado Aleatorio (ECA). Se realizaron búsquedas en MEDLINE, Embase, APA PSYCNET y en el Registro Cochrane Central de Ensayos Controlados (Cochrane Central Register of Controlled Trials) de ECA, publicados en inglés, que examinaran intervenciones conductuales para el consumo de cannabis y alcohol. Se examinaron 207 resúmenes y se identificaron 11 ECA con 4 211 adultos jóvenes. Las intervenciones con mayores tasas de retención y resultados estadísticamente significativos se administraron en formato en línea y se centraron en la reducción del consumo de cannabis. Solo la combinación de entrevista motivacional y economía conductual mostró resultados significativos tras el seguimiento, con una elevada tasa de retención. La integración de las intervenciones conductuales en las políticas públicas a nivel institucional, local o nacional podría dar lugar a resultados más positivos y a una mayor eficacia a largo plazo. La aplicación de estas intervenciones basadas en la evidencia en las estrategias de políticas públicas podría mejorar los resultados de salud a largo plazo y proporcionar soluciones escalables para abordar el consumo de sustancias entre los adultos jóvenes.

Palabras clave: Consumo de alcohol; Consumo de cannabis; Adultos jóvenes; Intervención conductual; Ensayo controlado aleatorizado.

Introduction

Substance use among young adults is considered a significant public health concern. According to the World Drug Report (WDR) 2021, about 275 million people worldwide used drugs. This number increased by 22%, globally, between 2010 and 2019 (UNODOC, 2021). During the COVID-19 pandemic, patterns of substance use changed among young adults, leading to increased alcohol consumption being attributed to circumstances such as employment loss and feelings of loneliness. However, vulnerability related to cannabis and alcohol consumption among this group remained stable throughout the pandemic (Pocuca et al., 2022).

Young adults represent a critical population group as they are crossing life milestones such as starting university, forming intimate relationships, and in many cases the beginning of working life. That period of their lives may be associated with increased risks related to access to substance use, emotional changes, and the importance given to peers (Steinberg, 2018).

Given these characteristics, interventions for substance use is mainly on the reduction of harm and prevention rather than intensive treatment, which is more frequent in the adult population (Stockings et al., 2016). Taking that into account, educational settings can be a more suited way to deliver early interventions for young adults, as well as mobile and online interventions that might be more appropriate and more easily adopted by this specific population group (Hall et al., 2016). The above could represent an additional advantage: that kinds of interventions are less expensive than intensive treatments for dependent users and could result in a more significant long-term public health impact (Levin & Chisholm, 2016).

A key challenge of existing behavioral interventions is their long-term effectiveness. For example, substance use prevention programs have shown a certain level of effectiveness, although their long-term impact is still uncertain (Stockings et al., 2016).

Other programs such as brief interventions, personalized individual interventions, motivational enhancement therapy, and motivational interview, have demonstrated small effects on alcohol consumption in young adults (Carey et al., 2009; Foxcroft et al., 2016); however, its long-term efficacy remains unproved (Patton et al., 2014). Motivational interview (MI) approaches are by far the most used preventive interventions for substance use in the young population. However, a review of 21 controlled studies examining the motivational interview for alcohol use and illicit substances in young adults reported a small average effect size with large uncertainty (Jensen et al., 2011).

On the other hand, behavioral economics (BE) has emerged as a promising approach for understanding decision-making related to substance use and designing interventions. BE research suggests that substance use is an inverse function of limited access to the substance and a direct function of limited access to alternative rewards (Bickel et al., 2014).

MI and BE represent two complementary frameworks that have proven effective in addressing substance use among young adults (Ladd et al., 2021; Murphy & Dennhardt, 2016; Smedslund et al., 2011). MI fosters an empathetic, client-centered environment that encourages young adults to explore their motivations and recognize discrepancies between substance use and personal goals. In contrast, BE suggests that young adults' decisions substance use is influenced by factors such as the availability and cost of alcohol and cannabis, the presence of substance-free alternative activities, and the relative devaluation of substance-free rewards compared to the immediate reinforcement provided by drug use.

Several studies have demonstrated the outperforming effect of BE to reduce cannabis and alcohol consumption, in comparison with

control conditions such as waitlist, placebo, or treatment as usual (Davis et al., 2015; Steele et al., 2020). For instance, it has been implemented the use of substance-free reinforcement and salience of delayed rewards with success (Murphy et al., 2012). Other programs have aimed to increase other reinforcements' value instead of substance use (Mackillop, 2016).

The current systematic review included some of the most used psychosocial interventions as well as BE interventions for alcohol and cannabis reduction. Considering that psychosocial interventions for the intervention of alcohol and cannabis use covered many treatment interventions and are based on varied theoretical backgrounds of psychosocial interventions, we selected those considered evidence based. This systematic review considered the following aspects: 1) the increasing rates of alcohol and cannabis use among young adults leads to the imperative need for proven behavioral interventions (Manthey, 2019); 2) many of the interventions available for alcohol and cannabis consumption lack replicability standards (Miller & Rollnick, 2014); 3) the absence of evidence about long-term effectiveness.

This study aimed to identify and compare published RCTs that evaluated behavioral interventions designed to reduce alcohol and cannabis consumption among young adults. The novelty of this systematic review relies on the fact that there are no published reviews including strictly RCTs comparing psychosocial interventions for alcohol and cannabis use reduction in the young adult population.

Methods

It was conducted a systematic review following the guidance of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols (PRISMA-P) (Liberati et al., 2009).

As a first step, it was explored the International Prospective Register of Systematic Reviews (PROSPERO) to ensure that no similar reviews were in progress. The review protocol was registered in the PROSPERO database (registration number CRD42020161027).

Psychosocial interventions terms

As we mentioned earlier, we selected those interventions that have shown effectiveness and are considered "evidence-based". Therefore, terms used were: "education", "mindfulness", "counseling", "educative sessions", "mindfulness-based meditation for substance use", "drug counselling", "skills-based interventions", and "personalized normative feedback".

Besides, it was choosing the term "behavioral economics" to expand the concept and it was added related concepts such as "delay discounting", "reinforcement", "contingency management", "delayed reward discounting", "temporal discounting", "community reinforcement approach".

Search strategy

We employed the PICOS approach and Boolean search methods (AND, OR, NOT) using a combination of MeSH, DeCS, and Emtree terms, and freetext terms were used.

The complete search strategies for all databases are available in the supplementary material (Table S1). We searched MEDLINE, Embase, APA PSYCNET, and the Cochrane Central Register of Controlled Trials in December 2021. Our search included articles from inception until December 2021, then the search was augmented using references from included articles.

Eligibility criteria

Published primary research articles were included if they met the following inclusion criteria: (i) the study design was either randomized and controlled or controlled before-after; (ii) the study included young adults aged 18 to 25 years who reported alcohol and/or cannabis use. It is important to note that the search was not restricted to this age group; however, the

included studies must have intervened population including people 18 to 25 years old; (iii) studies published in English: (i) the full text was not available; (ii) the study was a protocol or a secondary study; (iii) the included population met the diagnostic criteria for substance use disorder; and (iv) the reported substance use involved substances other than alcohol and cannabis. Additionally, a pilot test of the eligibility criteria was conducted to refine the methodology before full implementation.

Data extraction and analysis

All studies were imported into Mendeley reference management software, and duplicates were removed. Three independent reviewers (AJPM, MRM, FRC) conducted a title screen, thereafter the same three reviewers did a screening of the abstracts and full texts of the remaining studies and documented reasons for exclusion. Two reviewers (MRM, FRC) independently extracted and screened the data, resolving any discrepancies through consensus. In instances where disagreement persisted, a fourth reviewer (JHES) was consulted to ensure objectivity in the selection process.

It was developed a standardized data extraction form in Microsoft Excel based on the Cochrane Effective Practice and Organization of Care (EPOC) form (Cochrane Effective Practice and Organisation of Care (EPOC), 2017).

Collected data included study context, population, research design, intervention, outcomes, and results. After identifying the main types of interventions, studies were categorized based on whether they followed a behavioral economics approach or based on a different theoretical framework.

The included studies were highly heterogeneous in terms of implementation, delivery type, measurement variables, and statistical analyses. However, it was possible to identify two broad categories of interventions: those based on behavioral economics and those based on other well-established psychosocial interventions for reducing alcohol and cannabis use.

A narrative synthesis was conducted by comparing interventions based on behavioral economics and interventions based on some of the most used psychosocial interventions for substance use reduction.

Quality assessment

Included studies were assessed for methodological quality and risk of bias using the revised Cochrane Risk-of-Bias tool for randomized trials (RoB 2) tool (Sterne et al., 2019). Each study received a global score of high risk, some concern, or low risk of bias. The assessment visualization was performed using the Risk-of-bias VISualization (robvis) tool (McGuinness & Higgins, 2020).

Results

Of the 232 citations retrieved, 11 randomized controlled trials (RCTs) involving 4,211 participants met the prespecified inclusion criteria and were included in the review (Figure 1). Information on excluded papers is provided in the supplementary material (Table S2). It is important to note that only 232 potential papers were retrieved because we just wanted to include randomized controlled trials, and the literature employing this experimental design in this field is relatively scarce.

Description of studies

Table 1 provides an overview of the included studies. Sample sizes ranged from 63 to 1,292 participants, whose mean age ranged from 18 to 39 years, and 44.6% were female.

Most studies were based on or incorporated motivational interviewing as the primary intervention (n = 9). The remaining studies included motivational enhancement therapy (n = 1) and self-regulation and self-control interventions (n = 1). The comparators were mostly no intervention (assessment only) (n = 5), followed by

education sessions (n = 1), treatment resource referrals (n = 3), usual treatment (n = 1), and waitlist control (n = 1). Eight studies focused exclusively on cannabis use, one on alcohol use, and two on both alcohol and cannabis use.

The primary outcomes assessed were substance use frequency (n = 9) and complete abstinence (n = 1). All studies reported post-intervention effects and follow-up data ranged from 2 to 48 weeks.

Methodological quality of the studies

Figure 2 shows that 81.8% of the studies were rated at low risk for selection bias (i.e., random sequence generation), 63.6% of the studies reached a low risk regarding selective outcome reporting, and 54.5% reached a low risk regarding allocation concealment. In the other domains, low risk related to attrition bias (i.e., incomplete outcome data) was achieved in 45.4% of the studies, low risk in performance bias (i.e., Blinding of participants and personnel) was attained by 36.3% and only 18.1% reached a low risk in detection bias (i.e., Blind outcome assessment). Otherwise, low risk in other sources of bias was achieved by 100% of the studies. Furthermore, only a study was rated at high risk regarding performance bias, however, it was included in the review due to this same study was rated at low risk on attrition bias, selective outcome reporting, and other sources of bias.

Characteristics of the interventions

Most interventions were brief versions with lengths ranging from one single session to multiple sessions up to 50 days of follow-up. Regards to retention rates, the combination of brief negotiated interview (BNI) with motivational interviewing (MI) (Fuster et al., 2016) achieved a higher retention rate (98%), followed by peer network counseling-txt (PNC-txt) based on motivational enhancement therapy (MET) (M. J. Mason et al., 2018) and, web personalized feedback (WEB-PFI) based on MI (Lee et al., 2010) which achieved a retention rate of 95% and 94% respectively (Table 1).

The combination of brief motivational interview (BMI) and substance-free activity sessions (SFAS) (Dennhardt et al., 2015), MI alone (McCambridge et al., 2008), and BMI (McCambridge et al., 2008) achieved acceptable retention rates of 88%, 80%, and 73% respectively. Otherwise, the combination of personalized feedback intervention with strategies to manage negative affect (PFI-NAC) (Buckner et al., 2020), FRAMES which is based on MI (Laporte et al., 2017), self-regulation and self-control (Tossmann et al., 2011) and BMI (Signor et al., 2013) achieved poor retention rates of 62%, 51%, 28% and, 22% respectively (Table 1).

Regarding effectiveness, only 3 studies reported statistically significant differences for pre and post-intervention measurements and reported high retention rates (PNC-txt, PFI-NAC, and BMI plus SFAS) (Buckner et al., 2020; Dennhardt et al., 2015; M. J. Mason et al., 2018); nevertheless, the study with the combination of MI and BE showed evidence of high-risk of performance bias (Dennhardt et al., 2015). Two studies reported statistically significant differences but with low retention rates (BMI, and self-regulation plus self-control) (Signor et al., 2013; Tossmann et al., 2011). The study using BMI for alcohol use reduction reported significant results but a very low retention rate (23%) (Signor et al., 2013). It is important to note that both studies were brief versions with a length of 1 session and seven sessions respectively.

Table 2 describes the characteristics of interventions. It is important to note that the interventions that reported higher retention rates and statistically significant results were delivered in an online format and they were focused mostly on cannabis use reduction (Buckner et al., 2020; Dennhardt et al., 2015; M. J. Mason et al., 2018). As well as the interventions that reported statistical effectiveness

but with low retention rates, were also delivered in a format different from the face-to-face one, and they were focused on alcohol use reduction and cannabis use reduction (Signor et al., 2013; Tossmann et al., 2011).

In addition, of the interventions that reported having provided any economic or academic incentive for participation, one reported a high retention rate (95%) and also effectiveness (M. J. Mason et al., 2018), one reported effectiveness and low retention rate (62%) (Buckner et al., 2020), and one also reported effectiveness but very low retention rate (26.1%) (Tossmann et al., 2011). Otherwise, two interventions delivering economic incentives reported a high retention rate (94% and 80%) but no effectiveness (Lee et al., 2010; McCambridge et al., 2008).

Lastly, most interventions were delivered by health professionals with training in the theoretical approach underlying the intervention. Additionally, none of the included studies used BE interventions alone; instead, four studies incorporated BE in combination with MI. One study combined BMI with SFAS, while the remaining studies utilized BMI alone.

The majority of interventions including BE reported good to acceptable retention rates, ranging from 88% to 79%, with only one study reporting a very low retention rate (23%). Moreover, many of these interventions were delivered in a face-to-face format.

In summary, this systematic review identified 11 randomized controlled trials involving 4,211 participants, primarily employing motivational interviewing as the intervention. The studies demonstrated varying sample sizes and retention rates, with online interventions showing higher retention and statistically significant effects on cannabis use reduction compared to face-to-face approaches. Most studies exhibited a low risk of selection bias, underscoring their methodological rigor. These findings suggest that integrating motivational interviewing and behavioral economics can be an effective approach to addressing substance use among young adults, warranting further exploration and application in clinical settings.

Discussion

This review identified motivational interviewing (MI) as the most commonly used approach for reducing cannabis and alcohol use among young adults. It was also usual that the interventions were typically brief versions (BI), lasting generally one session, and the online format was as popular as the in-person interventions. The popularity of these characteristics may be attributed to their ease of implementation and low cost.

Among the reviewed studies, just three reported significant results and one of them was rated as high risk due to performance bias. Two had significant results but with low retention rates, besides three of the reviewed papers had very low retention rates (23%, 26.1%, and 55,7%). Notably, two of those studies include BE in the intervention program. The study combining BMI and SFAS for cannabis and alcohol use reduction (Dennhardt et al., 2015) and the study using BMI for alcohol use reduction (Signor et al., 2013); of them had a short length.

However, the evidence regarding the effectiveness of MI and BE interventions remain inconclusive. While some studies reported significant substance use reduction and high retention rates, others using the same theoretical approach and of similar length did not yield significant results. This inconsistency makes it difficult to determine whether MI alone or in combination with BE in a brief format is an effective intervention for alcohol and cannabis reduction. Further research is needed to confirm its efficacy.

The evidence is so far discordant, that previous systematic reviews have reported the effectiveness of BMI on excessive alcohol use (Vasilaki et al., 2006) but not on cannabis use (Li et al., 2016), and a review of reviews reported

a certain level of effectiveness for both alcohol and illicit drug use (Frost et al., 2018).

Even with that, it could be considered that Behavioral economics (BE) approaches were the most effective. BE theorizes that decisions to use psychoactive substances are a function of the benefit/cost ratio of substance use concerning the benefit/cost ratio of substance-free activities. Substance use is explained by a pattern of a marked preference for small, immediate rewards vs. larger but delayed rewards (Murphy & Dennhardt, 2016). In addition, the interaction between endogenous effects of the substance and contextual factors including substance monetary and not monetary prices, low availability of alternatives free of substances, stressful situations, and social incentives, are also part of the substance use behavior explanation (Skidmore et al., 2014).

Based on the above, a large group of BE interventions has been focused on offering alternative monetary reinforcers in explicit competition with substance use. Other groups of interventions have used alternatives to substance use like engagement in social reinforcement activities, exercise and academic activities, and training to reduce temporal discounting (Bentzley et al., 2013). Recently, brief motivational interventions (BMIs) have incorporated BE standards by providing feedback on time allocation for substance use compared to other beneficial activities (e.g., family, friends, academics, exercise), which may offer a greater opportunity-cost of substance consumption (Ladd et al., 2021).

It is important to note that even though a large sample size was included across 11 studies (N = 4,211), only a few studies demonstrated effectiveness. For example, although several studies recognized a limitation in the lack of biochemical validation of the substance consumption reports, most of the reviewed articles' results are based only on self-report instruments. Though, this decision may be attributed to the high cost of biochemical assessments, it may introduce bias and reduce the reliability of findings.

On the other hand, many of the included studies in the current review reflected the lack of participants' variety in terms of relevant sociodemographic factors, since most of them were mainly male university students. Include gender differences, and social and contextual variables in the analysis should be considered as relevant to prove the reliability and validity of these interventions (McDermott et al., 2013; W. A. Mason et al., 2009).

The above also relates to the lack of studies targeting to concomitant use of alcohol and cannabis. The included interventions were directed mostly to cannabis consumers, despite alcohol being one of the most consumed substances worldwide and better interventions are also needed urgently to reduce hazardous alcohol use in young adults (Garcia-Cerde et al., 2021). Besides, strategies to achieve higher retention rates are also necessary. Most of the included studies had a follow-up rate below 40% which represent a deficiency in generalization (Dalton et al., 2021).

Thus, our findings indicate the following as the interventions with the greatest potential to achieve retention rates: 1) the combination of the brief negotiated interview with motivational interviewing for cannabis use, 2) peer network counseling-txt based on motivational enhancement therapy for cannabis use, 3) web personalized feedback based on motivational intervention for cannabis use (Fuster et al., 2016; Lee et al., 2010; M. J. Mason et al., 2018). Moreover, two of them were applied under an online approach (Lee et al., 2010; M. J. Mason et al., 2018).

As has been pointed out in a previous systematic review focused on online interventions for cannabis use, targeted interventions may include peer support and regular feedback to achieve increased adherence as well

as user-centered design procedures (Beneria et al., 2021). The results of the current systematic review support in part that statement, since peer network counseling-txt and personalized feedback intervention plus strategies to manage negative affect, reported positive results and, they were delivered using an online format.

A previous study about the risk of bias assessment of behavioral clinical trials included in systematic reviews for substance use agreed on the need for rigorous research since the risk of bias assessments is usually high (Bo et al., 2021). In our revision, incomplete outcome data bias and blinding of outcome assessment bias were the most concerning biases, thus future RCTs on behavioral interventions for substance use should try to address this issue to achieve better accuracy of results.

The practical perspective, interventions integrating BE principles should be prioritized, as they encourage engagement in substance-free activities. Policymakers can support the development and dissemination of these evidence-based interventions by providing funding and promoting them through public health campaigns on digital platforms, which have proven to be both effective and cost-efficient. Furthermore, incorporating diverse social contexts and implementing comprehensive follow-up strategies may improve intervention accessibility and retention. Addressing these aspects systematically could lead to more robust strategies for reducing substance use among young adults.

Limitations

Despite efforts to include most of the available evidence in this review, limitations related to the systematic review methodology must be considered. First, some authors included substances other than alcohol and cannabis but did not differentiate the results by substance. Consequently, such studies were excluded from this review, despite the potential relevance of their findings.

Additionally, significant heterogeneity among the included studies presents a challenge to draw conclusions. The interventions varied in theoretical underpinnings, including MI, BE approaches, or combinations of both, each influencing retention and effectiveness differently. For instance, studies that combined MI with BE produced mixed results in terms of retention and effectiveness, as seen in interventions such as brief negotiated interviews (BNI) and personalized feedback.

Furthermore, the studies differed substantially in design and implementation, with intervention lengths ranging from a single session to multiple weeks, and follow-up periods extending from 2 to 48 weeks. Such methodological diversity complicates efforts to compare and generalize outcomes uniformly. Otherwise, it is important to consider that most of the analyzed studies were conducted in developed countries. Moreover, the review only included literature published in English, potentially overlooking relevant studies published in other languages and targeting different populations.

Conclusions

This systematic review aimed to identify and compare published RCTs assessing some of the most commonly used psychosocial interventions for substance use reduction, particularly those considered "evidence-based" for reducing alcohol and cannabis consumption in young adults. Overall, findings suggest that MI in combination with BE appears to be the most effective approach. Additionally, interventions delivered online and in brief formats may improve retention rates. However, the presence of high risk of bias reduces confidence in these conclusions.

On the other hand, the few papers included showed that RCT is not the usual design implemented to assess behavioral intervention effectiveness for alcohol and cannabis use

reduction, thus quasi-experimental design is a more frequently used design.

The scarcity of significant results suggests that interventions need to be more engaging, specific, and targeted to effectively promote alcohol and cannabis use reduction among young adults. Moreover, embedding behavioral interventions into public policies at institutional, local, or national levels could enhance both short- and long-term effectiveness.

Finally, this is the first systematic review focused on RCTs assessing behavioral interventions for reducing cannabis and alcohol use in young adults. It provides insights into both the strengths and limitations of the current behavioral interventions. Future studies should include behavioral interventions from a public policy perspective; thus, this would provide better information on the effectiveness of these interventions at the public health level.

Role of funding sources

Universidad Nacional de Colombia supports JHES. Ministry of Science, Technology, and Innovation (MINCIENCIAS) - Young Scientist Program Supports MFR and FRC. Universidad Nacional de Colombia had no role in the study design, collection, analysis, or interpretation of the data, writing the manuscript, or the decision to submit the paper for publication.

Acknowledgement

We wish to acknowledge Equity in Health Research Group members for their valuable discussions on the manuscript.

Disclosures

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

Beneria, A., Santesteban-Echarri, O., Daigre, C., Tremain, H., Ramos-Quiroga, J. A., McGorry, P. D., & Alvarez-Jimenez, M. (2021). Online interventions for cannabis use among adolescents and young adults: Systematic review and meta-analysis. *Early Intervention in Psychiatry*, eip.13226. https://doi.org/10.1111/eip.13226

Bentzley, B. S., Fender, K. M., & Aston-Jones, G. (2013). The behavioral economics of drug self-administration: A review and new analytical approach for within-session procedures. *Psychopharmacology*, *226*(1), 113–125. https://doi.org/10.1007/s00213-012-2899-2

Bickel, W. K., Johnson, M. W., Koffarnus, M. N., MacKillop, J., & Murphy, J. G. (2014). The Behavioral Economics of Substance Use Disorders: Reinforcement Pathologies and Their Repair. *Annual Review of Clinical Psychology*, *10*(1), 641–677. https://doi.org/10.1146/annurev-clinpsy-032813-153724

Bo, A., Hai, A. H., Chen, D.-G., & Hammock, K. (2021). Risk of bias assessments in systematic reviews and meta-analyses of behavioral interventions for substance use outcomes. *Journal of Clinical Epidemiology*, *139*, 20–27. https://doi.org/10.1016/j.jclinepi.2021.06.012

Buckner, J. D., Zvolensky, M. J., & Lewis, E. M. (2020). On-line personalized feedback intervention for negative affect and cannabis: A pilot randomized controlled trial. *Experimental and Clinical Psychopharmacology*, *28*(2), 143–149. https://doi.org/10.1037/pha0000304

Carey, K. B., Scott-Sheldon, L. A. J., Elliott, J. C., Bolles, J. R., & Carey, M. P. (2009). Computer-delivered interventions to reduce college student drinking: A meta-analysis. In *Addiction*, *104*(11), 1807–1819. https://doi.org/10.1111/j.1360-0443.2009.02691.x

Cochrane Effective Practice and Organisation of Care (EPOC). (2017). *Data collection form.* EPOC *Resources for review authors, 2017.*https://epoc.cochrane. org/epoc-taxonomy

Dalton, K., Bishop, L., & Darcy, S. (2021). Investigating interventions that lead to the highest treatment retention for emerging adults with substance use

disorder: A systematic review. *Addictive Behaviors*, *122*. https://doi.org/10.1016/j.addbeh.2021.107005

Davis, M. L., Powers, M. B., Handelsman, P., Medina, J. L., Zvolensky, M., & Smits, J. A. J. (2015). Behavioral Therapies for Treatment-Seeking Cannabis Users: A Meta-Analysis of Randomized Controlled Trials. *Evaluation and the Health Professions*, *38*(1), 94–114. https://doi.org/10.1177/0163278714529970

Dennhardt, A. A., Yurasek, A. M., & Murphy, J. G. (2015). Change in delay discounting and substance reward value following a brief alcohol and drug use intervention. *Journal of the Experimental Analysis of Behavior*, *103*(1), 125–140. https://doi.org/10.1002/jeab.121

Foxcroft, D. R., Coombes, L., Wood, S., Allen, D., Almeida Santimano, N. M. L., & Moreira, M. T. (2016). Motivational interviewing for the prevention of alcohol misuse in young adults. In *Cochrane Database of Systematic Reviews*, *2016*(7). https://doi.org/10.1002/14651858.cd007025.pub4

Frost, H., Campbell, P., Maxwell, M., O'Carroll, R. E., Dombrowski, S. U., Williams, B., Cheyne, H., Coles, E., & Pollock, A. (2018). Effectiveness of Motivational Interviewing on adult behaviour change in health and social care settings: A systematic review of reviews. PLOS ONE, *13*(10). https://doi.org/10.1371/journal.pone.0204890

Fuster, D., Cheng, D. M., Wang, N., Bernstein, J. A., Palfai, T. P., Alford, D. P., Samet, J. H., & Saitz, R. (2016). Brief intervention for daily marijuana users identified by screening in primary care: A subgroup analysis of the ASPIRE randomized clinical trial. *Substance Abuse*, *37*(2), 336–342. https://doi.org/10.1080/08897077.2015.1075932

Garcia-Cerde, R., Valente, J. Y., Sohi, I., Falade, R., Sanchez, Z. M., & Monteiro, M. G. (2021). Alcohol use during the COVID-19 pandemic in Latin America and the Caribbean. *Revista Panamericana de Salud Publica/Pan American Journal of Public Health*, *45*. https://doi.org/10.26633/rpsp.2021.52

Hall, W. D., Patton, G., Stockings, E., Weier, M., Lynskey, M., Morley, K. I., & Degenhardt, L. (2016). Why young people's substance use matters for global health. *The Lancet Psychiatry*, *3*(3), 265–279. https://doi.org/10.1016/S2215-0366(16)00013-4

Jensen, C. D., Cushing, C. C., Aylward, B. S., Craig, J. T., Sorell, D. M., & Steele, R. G. (2011). Effectiveness of motivational interviewing interventions for adolescent substance use behavior change: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, *79*(4), 433–440. https://doi.org/10.1037/a0023992

Ladd, B. O., Murphy, J. G., & Borsari, B. (2021). Integration of motivational interviewing and behavioral economic theories to enhance brief alcohol interventions: Rationale and preliminary examination of client language. *Experimental and Clinical Psychopharmacology*, *29*(1), 90–98. https://doi.org/10.1037/pha0000363

Laporte, C., Vaillant-Roussel, H., Pereira, B., Blanc, O., Eschalier, B., Kinouani, S., Brousse, G., Llorca, P.-M., & Vorilhon, P. (2017). Cannabis and Young Users —A Brief Intervention to Reduce Their Consumption (CANABIC): A Cluster Randomized Controlled Trial in Primary Care. *The Annals of Family Medicine*, *15*(2), 131–139. https://doi.org/10.1370/afm.2003

Lee, C. M., Neighbors, C., Kilmer, J. R., & Larimer, M. E. (2010). A brief, web-based personalized feedback selective intervention for college student marijuana use: A randomized clinical trial. *Psychology of Addictive Behaviors*, *24*(2), 265–273. https://doi.org/10.1037/a0018859

Levin, C., & Chisholm, D. (2016). Cost-effectiveness and affordability of interventions, policies, and platforms for the prevention and treatment of mental, neurological, and substance use disorders. *Mental, Neurological, and Substance Use Disorders: Disease Control Priorities*, *4*(3), 219–236.

Li, L., Zhu, S., Tse, N., Tse, S., & Wong, P. (2016). Effectiveness of motivational interviewing to reduce illicit drug use in adolescents: a systematic review and meta-analysis. *Addiction*, *111*(5), 795–805. https://doi.org/10.1111/add.13285

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009).

The PRISMA Statement for Reporting Systematic Reviews and Meta-Analyses of Studies That Evaluate Health Care Interventions: Explanation and Elaboration. PLoS *Medicine*, *6*(7), e1000100. https://doi.org/10.1371/journal.pmed.1000100

Mackillop, J. (2016). The Behavioral Economics and Neuroeconomics of Alcohol Use Disorders. *Alcoholism: Clinical and Experimental Research*, *40*(4), 672–685. https://doi.org/10.1111/acer.13004

Manthey, J. (2019). Cannabis use in Europe: Current trends and public health concerns. *International Journal of Drug Policy*, *68*, 93–96. https://doi.org/10.1016/j.drugpo.2019.03.006

Mason, M. J., Zaharakis, N. M., Moore, M., Brown, A., Garcia, C., Seibers, A., & Stephens, C. (2018). Who responds best to text-delivered cannabis use disorder treatment? A randomized clinical trial with young adults. *Psychology of Addictive Behaviors*, *32*(7), 699–709. https://doi.org/10.1037/adb0000403

Mason, W. A., Kosterman, R., Haggerty, K. P., Hawkins, J. D., Redmond, C., Spoth, R. L., & Shin, C. (2009). Gender moderation and social developmental mediation of the effect of a family-focused substance use preventive intervention on young adult alcohol abuse. *Addictive Behaviors*, *34*(6–7), 599–605. https://doi.org/10.1016/j.addbeh.2009.03.032

McCambridge, J., Slym, R. L., & Strang, J. (2008). Randomized controlled trial of motivational interviewing compared with drug information and advice for early intervention among young cannabis users. *Addiction*, *103*(11), 1809–1818. https://doi.org/10.1111/j.1360-0443.2008.02331.x

McDermott, M. J., Drescher, C. F., Smitherman, T. A., Tull, M. T., Heiden, L., Damon, J. D., Hight, T. L., & Young, J. (2013). Prevalence and Sociodemographic Correlates of Lifetime Substance Use Among a Rural and Diverse Sample of Adolescents. *Substance Abuse*, *34*(4), 371–380. https://doi.org/10.1080/08897077.2013.776000

McGuinness, L. A., & Higgins, J. P. T. (2020). Risk-of-bias visualization (robvis): An R package and Shiny web app for visualizing risk-of-bias assessments. *Research Synthesis Methods*, *n/a*(n/a). https://doi.org/10.1002/jrsm.1411

Miller, W. R., & Rollnick, S. (2014). The effectiveness and ineffectiveness of complex behavioral interventions: Impact of treatment fidelity. *Contemporary Clinical Trials*, *37*(2), 234–241. https://doi.org/10.1016/j.cct.2014.01.005

Murphy, J., & Dennhardt, A. A. (2016). The behavioral economics of young adult substance abuse. *Preventive Medicine*, *92*, 24–30. https://doi.org/10.1016/j.ypmed.2016.04.022

Murphy, J., Dennhardt, A. A., Skidmore, J. R., Borsari, B., Barnett, N. P., Colby, S. M., & Martens, M. P. (2012). A Randomized Controlled Trial of a Behavioral Economic Supplement to Brief Motivational Interventions for College Drinking. *Journal of Consulting and Clinical Psychology*, *80*(5), 876–886. https://doi.org/10.1037/a0028763.A

Patton, R., Deluca, P., Kaner, E., Newbury-Birch, D., Phillips, T., & Drummond, C. (2014). Alcohol screening and brief intervention for adolescents: The how, what and where of reducing alcohol consumption and related harm among young people. *Alcohol and Alcoholism*, *49*(2), 207–212. https://doi.org/10.1093/alcalc/agt165

Pocuca, N., London-Nadeau, K., Geoffroy, M. C., Chadi, N., Séguin, J. R., Parent, S., Boivin, M., Tremblay, R. E., Côté, S. M., & Castellanos-Ryan, N. (2022). Changes in Emerging Adults' Alcohol and Cannabis Use From Before to During the COVID-19 Pandemic: Evidence From a Prospective Birth Cohort. *Psychology of Addictive Behaviors*, *36*(7), 786–797. https://doi.org/10.1037/adb0000826

Signor, L., Pierozan, P. S., Ferigolo, M., Fernandes, S., Campos Moreira de, T., Mazoni, C. G., & Barros, H. M. T. (2013). Efficacy of the telephone-based Brief Motivational Intervention for alcohol problems in Brazil. *Revista Brasileira de Psiquiatria*, *35*(3), 254–261. https://doi.org/10.1590/1516-4446-2011-0724

Skidmore, J. R., Murphy, J. G., & Martens, M. P. (2014). Behavioral economic measures of alcohol reward value as problem severity indicators in

college students. *Experimental and Clinical Psychopharmacology*, *22*(3), 198–210. https://doi.org/10.1037/a0036490

Smedslund, G., Berg, R. C., Hammerstrøm, K. T., Steiro, A., Leiknes, K. A., Dahl, H. M., & Karlsen, K. (2011). Motivational interviewing for substance abuse. *Cochrane Database of Systematic Reviews*, *2011*(11). https://doi.org/10.1002/14651858.cd008063.pub2

Steele, D. W., Becker, S. J., & Danko, K. J. (2020). Brief Behavioral Interventions for Substance Use in Adolescents: A Meta-analysis. *Pediatrics, 46*(4).

Steinberg, L. (2018). Age of Opportunity: Lessons from the new science of adolescence. *Journal of Child and Adolescent Mental Health*, *30*(1), 61–66.

Sterne, J. A. C., Savović, J., Page, M. J., Elbers, R. G., Blencowe, N. S., Boutron, I., Cates, C. J., Cheng, H.-Y., Corbett, M. S., Eldridge, S. M., Emberson, J. R., Hernán, M. A., Hopewell, S., Hróbjartsson, A., Junqueira, D. R., Jüni, P., Kirkham, J. J., Lasserson, T., Li, T., Higgins, J. P. T. (2019). RoB 2: a revised tool for assessing risk of bias in randomised trials. BMJ. https://doi.org/10.1136/bmj.l4898

Stockings, E., Hall, W. D., Lynskey, M., Morley, K. I., Reavley, N., Strang, J., Patton, G., & Degenhardt, L. (2016). Prevention, early intervention, harm reduction, and treatment of substance use in young people. *The Lancet Psychiatry, 3*(3), 280–296. https://doi.org/10.1016/S2215-0366(16)00002-X

Tossmann, D. H.-P., Jonas, B., Tensil, M.-D., Lang, P., & Strüber, E. (2011). A Controlled Trial of an Internet-Based Intervention Program for Cannabis Users. *Cyberpsychology, Behavior, and Social Networking*, *14*(11), 673–679. https://doi.org/10.1089/cyber.2010.0506

UNODOC. (2021). *World Drug Report 2021*. World Drug Report 2021.

Vasilaki, E. I., Hosier, S. G., & Cox, W. M. (2006). The Efficacy of Motivational Interviewing As A Brief Intervention For Excessive Drinking: A Meta-Analytic Review. *Alcohol and Alcoholism*, *41*(3), 328–335. https://doi.org/10.1093/alcalc/agl016

Figure Captions:

Figure 1

Search process and Study Selection

Figure 2

Quality Assessment

Table 1.
Description and main features of the included randomized controlled trials

Study	Age range or mean, women	Follow-up (weeks)	Theorical approach	Intervention	Length of intervention	Retention rates intervention and control (%)	T
Mason & Zaharakis, 2018, (N=101)	18-24, n=41	12	MET	PNC-txt	4-weeks	95 both groups	r
Buckner, Zvolensky & Lewis, 2020 (N=63)	18-30, n=53	2	MI and EDU	PFI-NAC	1 session	62 both groups	
Dennhardt, Yurasek, Murphy, 2015 (N=97)	18-22, n=57	16	MI and BE	BMI and SFAS	1 hour	88 and 67	r
Fuster, Cheng, Wang, Bernstein, Palfai, Alford & Saitz, 2016 (N=167)	39.7, N=56	24	MI	BNI and MOTIV	1 hour	98 both groups	r
Haller, Meynard, Lefebvre, Ukoumunne, Narring & Broers, 2014 (N= 594)	15-24, n=316	48	MI and BE	BMI	15 days	73 and 72	%
Lee, Neighbors, Kilmer & Larimer, 2010. (N=341)	17-19, n=186	24	MI	Web-PFI	1 session (Participants could rewatch the information for 3 months)	94 both groups	n=
McCambridge, Slym & Strang, 2008 (N=326)	16-19, n= 101	24	MI	MI	1 hour	80 and 82	n=
Signor, Pierozan, Ferigolo, Fernandes, Mazoni, & Barros, 2013 (N=637)	21-37, N=185	24	MI and BE	BMI	7 days (30 minutes sessions each day)	22 and 24	%
Tossmann, Jonas, Tensil, Lang & Strüber, 2011 (N=789)	24.7, N=	12	Self-regulation and self-control	QTS	50 days	28 and 25	n=
Stein, Hagerty, Herman, Phipps & Anderson, 2011 (N=332)	18-24, n=332	24	MI and BE	BMI	2 sessions	79 and 80	% 42

Effectiveness (Mean or % post-intervention) Treatment group vs control group	Control group (s)	Substances	Measures used for assessing substance use	Results
n=47; mean=20.2, SD=9.1 vs n=49; mean=20.6, SD=8.9	Assessment only	Cannabis	Urine drug test Youth Risk Behavior Survey CUDIT-R ASSIST	Significant p<0.05
Data not reported	Assessment only	Cannabis	Self-report version of the TLFB SIAS-S Brief Marijuana Consequences Questionnaire Daily drinking Questionnaire Rutgers Alcohol Problems Index	Significant p<0.05
n=44; mean=6.31, SD=3.3 vs n=33; mean=6.39, SD=4.2	Education sessions and BMI	Alcohol and Cannabis	Daily Drinking Questionnaire Young Adult Alcohol Consequences Questionnaire Marijuana Problems Scale Delay Discounting Task Adolescent Reinforcement Survey Schedule-Substance Use Version (ARSS-SUV) Alcohol Purchase Task (APT)	Significant p<0.05
n=59; mean=22.7, SD=9.7 vs n=53; mean=24.4, SD=8.5	List of substance use treatment resources	Cannabis	ASSIST TLFB 15-item short inventory of problems drugs (SIP-D) AUDIT-C	Not significant
% Events (substance use) = 33.2, n=287 vs % events=34.2, n=307	Assessment only	Alcohol and Cannabis	DEP-ADO clinical questionnaire	Not significant
n=171; mean=11.0, SD=18.7 vs n=170; mean=11.9, SD=19.3	Assessment only	Cannabis	Global Appraisal of Individual Needs–I Rutgers Marijuana Problem Index RTCQ BDP	Not significant
n=164; mean=13.8, SD=11.9 vs n=162; mean=14.5, SD=11.8	Drug information and advice-giving.	Cannabis	The Severity of Dependence Scale AUDIT	Not Significant
% Events (substance use) = 84.3, n=293 vs % events=90.1, n=344	Assessment and self-help material	Alcohol	NHSDA SAMHSA	Significant but with low retention rates p<0.05
n=863; mean=16.5, SD=20.5 vs n=429; mean=21, SD=17.1	Waiting list	Cannabis	Information on the frequency (days of consumption) and the quantity (in grams) German adaptation of the Drug-Taking Confidence Questionnaire-8.	Significant but with low retention rates p<0.05
% Events (substance use reduction) = 42.3, n=163 vs % events=36.0, n=169	Assessment only	Cannabis	TLFB Marijuana Problem Scale Structured Clinical Interview for DSM-IV Axis I Disorders SCID-I	Not Significant

Laporte, Vaillant-Roussel, Pereira, Blanc, Eschalier, Kinouani & Vorilhon, 2017 (N=261)	15-25, n=93	48	MI	FRAMES	1 session	51 and 61	n=1

Note: MET: Motivational Enhancement Therapy; EDU: Educational control; PNC-txt: Peer Network Counseling-txt; PFI-NAC: personalized feedback intervention and strategies to manage negative affect; PFI: Personalized Feedback Intervention; NAC: Negative Affect and Cannabis; TLFB: timeline Follow-back; MI: Motivational Intervention; BE: behavioral economics; BMI: Brief Motivational Interview; SFAS: substance-free activities sessions associated with delayed rewards; BNI: Brief Negotiated Interview; MOTIV: Adaptation of Motivational Interviewing; FRAMES: Feedback, responsibility, Advice, menu, empathy, self-efficacy; WEB-PFI: web personalized feedback intervention; AUDIT-C: Alcohol Use Disorders Identification Test. DEP-ADO: screening instrument; PFI: Personalized Feedback Intervention; RTCQ: Readiness to Change Questionnaire; BDP: Brief Drinker Profile; NHSDA: Household Survey on Drug Abuse; SAMHSA: The Substance Abuse and Mental Health; QTS: Quit The Shit

Table 2.
Overview of interventions examined in included studies

Study	Payment	Study objective	
Mason & Zaharakis, 2018, (N=101)	Yes, for assessment only (up to $150 in gift cards)	Cannabis use reduction	
Buckner, Zvolensky & Lewis, 2020 (N=63)	Yes, research credit for participating in psychology courses for completion of each survey	Cannabis use reduction	
Dennhardt, Yurasek, Murphy, 2015 (N=97)	Not reported	Alcohol and cannabis use reduction Reduce value of substance use	
Fuster, Cheng, Wang, Bernstein, Palfai, Alford & Saitz, 2016 (N=167)	Not reported	Cannabis use reduction	Ba 12
Haller, Meynard, Lefebvre, Ukoumunne, Narring & Broers, 2014 (N= 594)	Not reported	Reducing binge drinking and excessive cannabis use	
Lee, Neighbors, Kilmer & Larimer, 2010. (N=341)	Yes, $10 for completing screening, $25 for baseline, and $30 for 3- and 6-month follow-ups	Prevent marijuana use and reduced it	
Slym & Strang, 2008 (N=326)	Yes, £10 per episode of data collection	Cannabis use reduction	
Signor, Pierozan, Ferigolo, Fernandes, Mazoni, & Barros, 2013 (N=637)	Not reported	Alcohol use reduction	

n=141; mean=17.5, SD=14.5 vs n=121; mean=17.5, SD=9.0	Usual intervention	Cannabis	Number of joints and bongs smoked, the quantity of alcohol and cigarettes consumed, and experimentation with other drugs. Cannabis Abuse Screening Trial (CAST)	Not significant

Type of professional	Delivery type	Primary outcome	Type of measure (urine analysis or self-report)
Not reported	Online (Text messages)	Past-30-day cannabis use	Urine sample and self-report
Not reported	Online	Cannabis use frequency	Self-report
Clinician	In person	Delay discounting and alcohol and cannabis reward value	Self-report
Bachelor's degree level health educators trained for 120 hours initially and received 1-2 booster sessions per year	In person	Number of days of marijuana use during the past 30 days	Self-report
Family physicians	In person	Past 30 days excessive alcohol or cannabis use	Self-report
Not reported	Online	Past 90 days Marijuana use	Self-report
Psychology graduates trained in MI skills	In person	Past 3 months cannabis use frequency	Self-report and saliva sample but it wasn't analyzed
Trained counselors	By phone call	complete avoidance of any alcohol consumption	Self-report

Tossmann, Jonas, Tensil, Lang & Strüber, 2011 **(N=789)**	Yes, shopping voucher worth 30 Euro	Cannabis use reduction	
Stein, Hagerty, Herman, Phipps & Anderson, 2011 **(N=332)**	Yes, $30 for the baseline, $20 for the 1-month, $40 for the 3-month, and $50 for the 6-month assessments	Marijuana use reduction	
Laporte, Vaillant-Roussel, Pereira, Blanc, Eschalier, Kinouani & Vorilhon, 2017 **(N=261)**	Yes, general practitioners were paid €80 per patient enrolled; patients were not paid	Cannabis use reduction	Ge

Trained therapist	Online	Past 30 days cannabis use frequency and quantity	Self-report
Clinical psychologists trained in MI skills	In person	Past 30 days marijuana use since last interview (30 days)	Self-report
General practitioners in primary care practices trained in BMI	In person	Number of joints smoked per month	Self-report

doi: https://doi.org/10.15446/rcp.v34n2.114470

Language Development as a Mediator Between Child Maltreatment and Internalizing and Externalizing Behavior in Colombian Children and Adolescents*

Angélica María Galán Arias
Departamento de Psicología, Facultad de Ciencias Humanas, Universidad Nacional de Colombia

Pablo Muñoz Specht
Departamento de Psicología, Facultad de Ciencias Humanas, Universidad Nacional de Colombia

Ana Violeta Granados Roa
Área de investigación Estudios en Familia, CIDS, Facultad de Ciencias Sociales y Humanas, Universidad Externado de Colombia

Juan Carlos Caicedo Mera
Área de investigación en Salud, Conocimiento Médico y Sociedad, CIDS, Facultad de Ciencias Sociales y Humanas, Universidad Externado de Colombia

Diego Mauricio Aponte Canencio
Área de investigación en Salud, Conocimiento Médico y Sociedad, CIDS, Facultad de Ciencias Sociales y Humanas, Universidad Externado de Colombia

* *We wish to express our heartfelt gratitude to our dear friend and colleague, the late Jorge Martínez-Cotrina, who contributed significantly to this project. We also thank the Universidad Externado de Colombia for its generous support and funding, which made this project possible.*

How to cite this article: Galán A., Muñoz S., Granados R., Caicedo M & Aponte C. (2025). Language Development as a Mediator Between Child Maltreatment and Internalizing and Externalizing Behavior in Colombian Children and Adolescents. *Revista Colombiana de Psicología, 34*(2), 79-97. https://doi.org/10.15446/rcp.v34n2.114470

Correspondence: Angélica María Galán Arias (https://orcid.org/0000-0002-5847-1679).
Email: amgalana@unal.edu.co

SCIENTIFIC RESEARCH ARTICLE

RECEIVED: MAY 16TH, 2024 - ACCEPTED: OCTOBER 8TH, 2024

Language Development as a Mediator Between Child Maltreatment and Internalizing and Externalizing Behavior in Colombian Children and Adolescents

Abstract

Background: The developmental consequences of child maltreatment (CM) remain poorly understood, particularly in low- and middle-income countries. **Objective:** To examine whether language development mediates the relationship between CM and internalizing and externalizing behaviors. **Participants and setting:** 84 Colombian children and adolescents aged 5–14 (M = 9.67, SD = 2.18); 50% with a history of CM and 50% without, recruited from a child protection institution and the community, respectively. **Methods:** A cross-sectional, quasi-experimental design with two independent groups was used. Participants completed the Child Neuropsychological Assessment Battery (ENI-2) and the Child Behavior Checklist (CBCL). Mediation was tested using Ordinary Least Squares (OLS) and logistic regression. **Results:** CM was significantly associated with internalizing behavior through language development (effect = 2.1243; 95% CI [0.3184, 4.5415]; effect size = 0.473), but not directly. **Conclusions:** Language development accounts for 47.3% of the relationship between CM and internalizing behavior. Early interventions in this domain may help prevent such issues in affected children.

Keywords: child maltreatment, language development, internalizing behaviors, mediation analysis, Child Protective Services, PROCESS macro.

El desarrollo del lenguaje como mediador entre el maltrato infantil y los comportamientos internalizantes y externalizantes en niños y adolescentes colombianos.

Resumen

Antecedentes: Se desconoce en gran medida cómo el maltrato infantil (CM) afecta el desarrollo infantil, especialmente en países de ingresos bajos y medios. ***Objetivo:*** Analizar si el desarrollo del lenguaje media la relación entre el CM y los comportamientos internalizantes y externalizantes. **Participantes y contexto:** 84 niños, niñas y adolescentes colombianos entre 5 y 14 años (M = 9.67, SD = 2.18); 50% con historial de CM y 50% sin este, reclutados en una institución de protección y en la comunidad, respectivamente. ***Métodos:*** Estudio cuasi-experimental, transversal, con dos grupos. Se aplicaron dos instrumentos de evaluación: *Child Neuropsychological Assessment Battery (*ENI-2*) y Child Behavior Checklist (*CBCL*).* Se realizó un análisis de mediación con regresión de Mínimos Cuadrados Ordinarios *(*OLS) y logística. ***Resultados:*** El CM se asoció con comportamientos internalizantes mediante el desarrollo del lenguaje (efecto = 2.1243; CI *[0.3184, 4.5415];* tamaño del efecto = 0.473), pero no de forma directa. ***Conclusiones:*** El desarrollo del lenguaje explica el 47.3% de la relación entre CM y comportamientos internalizantes. Intervenciones tempranas podrían prevenir estos problemas.

Palabras clave: maltrato infantil, desarrollo del lenguaje, conductas internalizantes, análisis de mediación, servicios de protección infantil, PROCESS macro.

Introduction

Adverse childhood experiences (ACEs) are dangerous and potentially traumatic events that occur in childhood and are preventable (Centers for Disease Control and Prevention, 2019). One of these experiences is child maltreatment (CM), understood as the perpetration of physical, sexual, and psychological/emotional violence and neglect of infants, children, and adolescents from 0 to 17 years by parents, caregivers, and other authority figures. It is a significant public health problem and a violation of fundamental human rights (WHO, 2022, p. 2). Per definition, child abuse is considered an equivalent term to CM (De Bellis et al., 2002; Hentges et al., 2021).

From an ecological model perspective (Katz et al., 2021), CM is not merely an isolated act of violence occurring within a specific relationship but rather a multidimensional phenomenon rooted in and influenced by various levels of the environment. These characteristics encompass individual factors (e.g., caregiver's personal histories or children's characteristics), family dynamics (e.g., dysfunctional interactions, domestic violence), community influences (e.g., lack of social support networks, poverty), and macro-social elements (e.g., cultural norms, inadequate public policies for child protection). This approach highlights the complexity of CM and underscores the necessity for comprehensive, coordinated interventions addressing multiple ecological levels.

Given the complex, multifaceted nature of CM and its far-reaching consequences, it is crucial to examine not only the direct effects of CM on children's development but also the underlying mechanisms through which these effects manifest. While the ecological model provides a comprehensive framework for understanding the various factors contributing to CM, it also underscores the importance of investigating how these factors interact and influence children's outcomes across different domains of functioning. By exploring potential mediating factors, such as language development, we can gain deeper insights into the pathways through which CM impacts children's behavioral and emotional well-being, thereby informing more targeted and effective interventions.

The present research seeks to study the relationship between CM and internalizing and externalizing behaviors in children and adolescents, considering language development as a possible mediating factor. Although there is extensive literature on the effects of child abuse on children's cognitive and emotional development (Kavanaugh et al., 2017; Sheridan & McLaughlin, 2020; Humphreys et al., 2020; Chung et al., 2023), little is known about the mechanisms through which these effects occur.

Building on this foundation, recent robust studies on child maltreatment in Latin America, such as those by Moreno et al. (2019) and Balan et al. (2017), have made important contributions to our understanding. These studies have focused on how parental educational styles predict internalizing and externalizing behaviors in children and how parenting practices indirectly affect adolescent internalizing problems through emotional suppression. While these findings highlight the significant role that parenting dynamics play in the emotional and behavioral development of children and adolescents, they do not fully address the mechanisms through which maltreatment impacts child development, nor do they sufficiently consider how context-specific cultural, social, and economic factors may contribute to these impacts.

This scarcity of literature is even more alarming in the Latin American context, one of the regions in the world with the highest rates of CM, where it is estimated that between 30% and 60% of children and adolescents have suffered physical or emotional violence from their caregivers (Devries et al., 2019). Therefore, this scarcity harms the understanding of the phenomenon and, from there, the development of strategies that allow for preventing and mitigating the effects of abuse on child development.

Considering the above, this research studies language development as one of the possible

mediating mechanisms of the emotional and behavioral effects of child abuse based on a cross-sectional quasi-experimental design, in which Colombian children and adolescents victims of CM who live under institutional care in the protection system are included as participants in the target group, and children and adolescents from the community in a similar condition of psychosocial vulnerability but without exposure to CM participate in the comparison group. To avoid biases related to the source of information, the study considers the collection of information directly from the participants as well as from their caregivers.

In this way, the study can provide evidence on language development as a possible explanatory mechanism of the consequences of CM on the behavioral and emotional alterations of children, pointing out a factor that can be intervened early to prevent or mitigate developmental problems in this population, which has relevance for public health and, particularly, for child protection entities, schools, and other organizations responsible for providing care and services to this population in Colombia and other Latin American countries.

CM in Latin America and Colombia

It is estimated that more than half of children and adolescents worldwide have been subjected to various forms of violence, with CM on the rise (Morales, 2021). However, most available data come from high-income countries (WHO, 2006, 2022), making it necessary to study CM in low- and middle-income nations.

According to the Inter-American Commission on Human Rights (2020), six out of ten children in the Americas are raised using violent methods, such as physical punishment and psychological aggression. A more recent UNICEF (2024) report increases this estimate to two out of every three children and adolescents between the ages of 1 and 14. These figures align with previous studies indicating that nearly 60% of children in Latin America are victims of maltreatment (Devries et al., 2019). In turn, Colombia has been identified as one of the Latin American countries with the highest prevalence of toddlers exposed to corporal punishment —a form of physical maltreatment— and was the fourth Latin American country with the highest child homicide rates in 2013 (Cuartas et al., 2019). More recently, official Colombian statistics from 2022 showed an 18.85% increase in reported CM cases compared to 2021, with a rising trend over the past three years. The highest percentage of CM cases occurred among children and adolescents between 10 and 14 years old (Instituto de Medicina Legal y Ciencias Forenses, 2023).

Several studies have associated the high prevalence of CM in Colombia with diverse family and socioeconomic factors, such as parental unemployment and unschooling (Meza-Cueto & Navarro-Villamizar, 2022), household poverty, and the regional presence of armed violence (Cuartas, 2022). Research suggests that these factors also increase the likelihood of children being further exposed to maltreating environments (Oviedo-Tovar et al., 2021) and the loss of parental care (e.g., institutionalization) (Meza-Cueto & Navarro-Villamizar, 2022).

Consequences of CM in Children's Behavior and Affect

CM affects all domains of child and adolescent development, often leaving long-lasting sequelae into adulthood (Cook et al., 2005; Haslam et al., 2023; Moog et al., 2023). These effects include mental health disorders, cognitive impairments, and difficulties in emotional regulation, with far-reaching consequences that can span multiple generations (Moog et al., 2023) and can even be associated with a shorter life expectancy (Pérez & Díaz, 2022; Reina et al., 2022). In the emotional sphere, it has been identified that maltreated children tend to develop difficulties in emotional management, regulation, and expression, which favor the emergence of internalizing and externalizing behaviors (Eisenberg et al., 1998; Heleniak et al., 2016).

Internalizing behaviors are self-directed, whereas externalizing behaviors are directed toward the external physical or social environment (Achenbach et al., 2016). Internalizing behaviors identified in children exposed to CM are the tendency to passivity, avoidance, fear, and withdrawal (Balan et al., 2017; Milojevich et al., 2018). These symptoms are associated with the development of affective disorders such as depression (Blum & Naranjo, 2019; Fernández et al., 2020; Moretti & Craig, 2013; Shenk et al., 2015) and anxiety (Norman et al., 2012; Vilariño et al., 2015). On the other hand, the most common externalizing behaviors among children and adolescents exposed to CM are aggressiveness and impulsivity (Alink et al., 2009; Díaz-Aguado, 2001), often result in the development of behavioral disorders, social dysfunction, and involvement with judicial entities. Internalizing and externalizing behaviors are not mutually exclusive; rather, they are usually present simultaneously (Achenbach et al., 2016; Nivard et al., 2017; Patalay et al., 2017).

Consequences of CM in Children's Language Development

From a neurodevelopmental-social-constructivist perspective (Vygotsky, 1987; Valsiner & Van der Veer, 2014; Yasnitsky, 2018), language is a cognitive process that emerges from the interplay between biological maturation and social interaction, both of which can be severely affected in children exposed to CM (McDonald et al., 2013). According to Cummings and Berkowitz (2014), most cases of CM begin during early childhood, a critical period for language development. In this regard, it has been identified that caregivers who use abusive practices tend to interact less with children, ignore them more, react less frequently to their speech attempts, and use a more limited range of vocabulary and syntactic structures during communication with them (Girard et al., 2014), which negatively affects their linguistic and socio-emotional skills through the lack of adequate stimulation. Likewise, CM can cause structural and functional brain damage that harms children's language development (De Bellis et al., 2013; Amaro Hurtado, 2018). Specifically, neurological sequelae and structural damage have been found in the temporal and frontal lobes, impairing language, learning, and memory functions (Deambrosio et al., 2018).

Research consistently demonstrates a significant relationship between CM and language problems, with maltreated children exhibiting poorer language skills across receptive, expressive, and pragmatic domains (Bouchard et al., 2016; Lum et al., 2015; Sylvestre et al., 2016). This association is particularly pronounced in younger children (Sylvestre et al., 2016). Bouchard et al. (2016) identified in a meta-analysis of 23 studies that language development is compromised regardless of the type of maltreatment —physical abuse or neglect— to which the child was exposed. On the one hand, in receptive language, it was identified that maltreated children understand fewer words and verbal instructions, while in their expressive language, a low syntax complexity and a delay in lexical development were observed, which impacts their development of social skills. Similarly, research on recently institutionalized Latin American children, aged eight, found scores lower-than-expected for their age in language expression, comprehension, and metalinguistic skills (Cobos-Cali et al., 2017).

Language abilities play a crucial role in emotional reminiscing, with maltreatment disrupting the association between child language and mother-child emotional dialogues (McDonnell et al., 2019). Furthermore, language disorders are associated with behavioral, emotional, and social problems, particularly disorders involving comprehension and pragmatic components (Baixauli-Fortea et al., 2015). However, methodological inconsistencies in maltreatment and language measurement complicate the understanding of these relationships (Alvarado et al., 2022).

Language Development and Internalizing and Externalizing Behaviors

Vygotsky (1987) proposed language as an essential tool for self-regulation skills development based on observations of children gradually learn to use internal speech to regulate their emotions and organize their behavior (Stanley et al., 2011). Several studies have associated early language development alterations with emotional and behavioral problems later in life (Hentges et al., 2021; Lindsay et al., 2012; St Clair et al., 2011; Yew & O'Kearney, 2015). Specifically, Salmon et al. (2016) found that children with poor language skills have difficulties recognizing and understanding their own and others' emotional expressions, which is associated with the development of internalizing behaviors. The association between alterations in language development and externalizing behaviors has also been observed (Hentges et al., 2021).

Conversely, adequate language development has also been identified as a protective and resilience factor in various ACEs. For instance, Flouri et al. (2014) found that children's emotional difficulties associated with poverty were moderated by their verbal ability since those who were in a situation of poverty and did not present language alterations showed a greater capacity for emotional regulation than those with the same socioeconomic conditions, but with affected language development. Similarly, Moreno et al. (2020) identified good communication skills as a protective factor for developing externalizing and internalizing behaviors.

Despite the relevance of the association between these variables, the relationship between language development, internalizing behaviors, and externalizing behaviors has been little studied, particularly in Colombia and Latin America, where no known study to date has explored language development as the mediator in the relationship of CM and this type of behaviors. For this reason, it is relevant to widen research in this area by understanding the role of language development in the emergence of such difficulties, which could foster the development of strategies for the prevention of internalizing and externalizing behaviors in children exposed to CM.

Current Study

Based on the above, the present study seeks to provide evidence on the mediating role of language development in the relationship between CM, internalizing behaviors, and externalizing behaviors. As hypotheses of the mediation model, it is expected based on correlations previously identified in the literature: first, that language development is found a significant mediator in the relationship between CM and both externalizing behaviors (Bress et al., 2013; Borenstein et al., 2014) and internalizing behaviors (Hentges et al., 2021; McDonnell et al., 2019).

Methods

This study employs a quasi-experimental cross-sectional design comprising a target group (CMG) and a comparison group (CG), in which the variables of sex, age, and sociodemographic conditions were controlled.

Participants

The initial sample consisted of 100 participants. After a 16% dropout rate, the final sample comprised 84 children and adolescents aged 5 to 14 years ($M = 9.67$, $SD = 2.18$). Participants were divided into two groups: the CM group (CMG), made up of 45 children (age range = 6–13 years, $M = 9.66$, $SD = 2.18$) with a history of abuse and institutionalized under the Colombian Child Protective Services (ICBF); and the comparison group (CG), made up of 39 children (age range = 5–14 years, $M = 9.69$, $SD = 2.19$) with no history of maltreatment. The CG participants were recruited from a community center and lived with their main family caregivers.

Overall, 77.4% of the participants were children (aged 5–11 years; CMG: $n = 36$, CG: $n = 29$), and 22.6% were adolescents (aged 12–14 years; CMG: $n = 9$, CG: $n = 10$). Regarding gender distribution,

56% of the participants were male (CMG: n = 23, CG: n = 24), and 44% were female (CMG: n = 22, CG: n = 17).

In addition to the age range, between 5 and 14 years, the main inclusion criterion for the CMG and, therefore, the main exclusion criterion for the CG was having a history of CM, assessed by a screening survey that collected sociodemographic data and explored exposure to thisadverse experiences. An additional exclusion criterion for both groups was a diagnosis of intellectual disability or severe neurological disorders.

The CG was recruited from a community center that provides extracurricular care to children from socioeconomically vulnerable conditions. From this population, the participants who could be matched by age, sex, and socioeconomic level with the CMG participants were selected for the CG, accepting an age difference of up to ±7 months. This matching process was implemented to ensure comparability between groups and minimize the influence of other variables on the results so that the observed differences could be more directly attributed to CM.

Measures

Sociodemographic Survey

This ad hoc instrument was designed by the Center for Research in Social Dynamics (CIDS) of the Externado University of Colombia (Muñoz & Caicedo, 2018). The survey consists of 28 items, including 12 closed questions answered in a yes/no/don't know format and the remaining items answered qualitatively. It collects data on the child's demographics (e.g., sex, age, ethnicity, education, and socioeconomic level), developmental issues (e.g., Did the child/adolescent have premature birth?), medical and mental health conditions (e.g., Does the child/adolescent currently present a condition of malnutrition or risk of malnutrition?), and critical early life events, including exposure to CM and other ACEs (e.g., Was the child/adolescent placed in a foster home?; Reason for admission to the institution). The survey's administration was carried out by a trained interviewer and it lasted 15-30 minutes per participant. For the CG, the survey's respondents were the children's family caregivers, whereas for the CMG, the information was provided by institutional caregivers and triangulated with the Child Protective Services case records, which are the most reliable documents available to collect information on institutionalized children in Colombia (Granados et al., 2021).

Child Behavior Checklist (CBCL)

The CBCL is a hetero-administered standardized instrument that assesses behavioral and emotional problems in children and adolescents aged 6 to 18 years from the perspective of their primary caregivers (Achenbach & Edelbrock, 1983). It is extensively used in mental health services, schools, medical settings, child and family services, public health agencies, child guidance, training, and research (Bordin et al., 2019). The CBCL consists of 113 items regarding emotional and behavioral symptoms, answered on a three-point Likert scale (0 = not true, 1 = somewhat or sometimes true, 2 = very true or frequently true). The instrument provides raw and standardized (T) scores for two global scales (i.e., "Internalizing" and "Externalizing") and four additional subscales (Achenbach et al., 2001). Only the T scores for the two global scales were used in the present study.

The CBCL has been widely used in the Latin American context and has undergone consistency assessments, adaptation, and validation processes for 44 societies, including the Colombian population (Rescorla et al., 2012). Regarding reliability, the Cronbach's alpha found in the present study was 0.94, indicating high internal consistency, similar to previous research (Achenbach et al., 2001; Bordin et al., 2019).

Child Neuropsychological Evaluation Battery 2 (ENI-2)

The ENI-2 is a battery developed in Colombia by Matute et al. (2014) that comprehensively

assesses neurocognitive development in children and adolescents aged 5 to 16 years. It is administered directly to children by an evaluator, with a total application time of approximately 3 hours. The ENI-2 assesses lateral preference, soft neurological signs (i.e., neurological deficits related to perceptual-sensory integration and motor coordination), and 11 neuropsychological processes (e.g., attention, constructional skills, memory, perception, language, conceptualization skills). The present study focused on the language subscale, which evaluates verbal expression and comprehension through different tasks, such as the repetition of syllables and words, image naming, narrative coherence, following instructions, and speech comprehension. The application time for this subscale was 20-30 minutes.

The ENI-2 is one of the most widely used neuropsychological instruments in Colombia, as it provides a clear perspective on brain, cognitive, and learning functioning in children and adolescents and, if necessary, permits obtaining the determination of IQ levels (Rosselli et al., 2021). Similarly, the ENI-2 is used in other Latin American countries, such as Ecuador (Pérez, 2015), Chile (Aviles et al., 2018), and Argentina (Aran-Filippetti et al., 2016), and has demonstrated good validity and reliability results (Matute et al., 2014). Cronbach's alpha, calculated from the T-scores of the 13 ENI subscales, indicated high reliability ($\alpha = 0.945$), reflecting strong consistency across the subscales.

Ethical Considerations

The study received approval from the Externado University of Colombia Ethics Committee. The ethical and legal principles that govern psychological research with minors were strictly followed. The conditions of participation in the study were explained to both the participants and their guardians, and their written informed consent was obtained. For the CG, the guardians were the family caregivers, while for the CMG, the Family Advocate provided consent. Finally, the results of the participants' assessments were shared with their caregivers to ensure the well-being of the children, particularly in cases where the need for referral to specialized care was detected.

Procedure

The study was presented to the Child Protective Services (CPS) institution and the community services center. Any questions regarding the study's objectives, procedures, and potential risks or benefits were answered, and the referral criteria were explained. Subsequently, the CPS institution and the community center provided a list of all available children and adolescents who met the study criteria. The investigators then contacted potential participants. The study was explained to both the child and their caregiver, and all questions were answered. Informed consent was obtained after both the legal guardian and the child agreed to participate.

Once the CMG was established, children from the community services center who met the study criteria and were comparable in age, sex, and socioeconomic status to the CMG participants were selected to form the CG.

To ensure that the referred children and adolescents from both groups met the study criteria and to collect their basic demographic data, the family or institutional caregiver completed the Sociodemographic Survey with the support of a trained interviewer. For children in CPS, the institution's coordinator appointed one institutional caregiver per child to fill out the questionnaires. These institutional caregivers were selected based on their familiarity with the child. For children in the CG, it was their main family caregiver who filled out the instruments. Finally, the appointed caregiver in each case filled out the CBCL, and the child was assessed with the ENI-2 by a trained evaluator.

Statistical Analyses

First, sample size adequacy and group equivalency were tested, and the normality tests for the study variables (language development,

internalizing behaviors, and externalizing behaviors) and the descriptive statistics were carried out. Second, bivariate Spearman correlation analyses were performed to examine the relationships between variables within each group. Finally, a mediation analysis was conducted to examine the role of language development in the relationship between CM and internalizing/externalizing behaviors. This analysis was performed using the PROCESS macro (Hayes & Hofmann, 2018) in SPSS v22.0, implementing Model 4 with 10,000 bootstrap samples at a 95% confidence interval to ensure robust and reliable estimates of indirect effects, given the relatively small sample size and the non-normality of the data. The bootstrap method is widely recommended for mediation analyses, as it provides more accurate confidence intervals for indirect effects, particularly when normality assumptions are not met (Preacher & Hayes, 2008).

Results Sample Size and Equivalency of Groups

A post-hoc power analysis was conducted using G*Power to assess the adequacy of the sample size. With 84 participants and a moderate effect size (d = 0.15), the power was found to be 0.89, indicating an 88.69% probability of detecting a real effect. This suggests that the sample size was adequate for detecting significant relationships in the study.

Regarding group equivalency, preliminary statistical analyses did not find significant differences between the groups in the matched variables of age, sex, and socioeconomic level ($p > .05$) but did find differences in educational level: it was identified that the CG children had completed more years of formal education than CMG children ($F(1, 99) = 5.32$, $p < .05$). Otherwise, the groups only varied in terms of residence between living with their family and not having a history of CM (CG) and living in a protective service institution and having a history of exposure to CM (CMG). This is coherent with the matching design and supports comparability between groups.

Normality Tests and Descriptive Statistics

The Shapiro-Wilk tests showed that the language development variable was normally distributed in both groups (CMG's $p = .031$, CG's $p = .09$), while the internalizing behaviors (CMG's $p = .01$, CG's $p = .02$) and externalizing behaviors (CMG's $p = .02$, CG's $p = .02$) variables were not normally distributed in either group. Therefore, non-parametric statistics were applied for group comparisons and bivariate correlations.

On average, CMG participants had higher scores on the Internalizing ($M = 52.2$, $SD = 10.6$, $p = .03$) and Externalizing ($M = 54.5$, $SD = 10.6$, $p = .00$) scales of the CBCL compared to CG participants (see Table 1), indicating that children exposed to CM present greater emotional and behavioral symptoms than children without such a history. In contrast, CG participants had higher scores on the language development scale ($M = 48.5$, $SD = 7.7$, $p = .00$) of the ENI-2 compared to CMG participants, suggesting that children exposed to CM have lower language development than their peers. These group differences were statistically significant in Mann-Whitney U tests.

Bivariate Spearman's Correlations

On the one hand, in the CMG, it was shown that the internalizing behaviors and language development variables were significantly, moderately, and inversely correlated ($r = -0.317$, $p = .034$), indicating that participants with a history of CM and lower language development showed more internalizing behaviors. However, externalizing behaviors variable did not correlate with language development ($r = 0.116$, $p = .45$), leading to the rejection of the first mediation model.

Regarding the CG group, language development variable did not significantly correlate with internalizing behaviors ($r = -0.169$, $p = .24$) or externalizing behaviors ($r = -0.154$, $p = .20$),

suggesting no significant relationship between linguistic development and internalizing or externalizing behaviors in children without CM.

Mediation Analysis

Considering the Spearman's correlation results, only mediation model 2 was considered. Results are shown in Figure 1 below.

It was found in pathway *a* that the direct effect of CM on language development was significant (effect = -8.2, Boot 95% CI [-11.4, -4.9]), as was the direct effect of language development on internalizing behaviors in the pathway *b* (effect = -0.2, Boot 95% CI [-0.50, -0.006]). In contrast, in pathway *c*, the direct effect of CM on internalizing behaviors was not found significant (effect = 2.3, Boot 95% CI [-2.12, 0.6]).

Figure 1

Mediation Model

Note. Author's elaboration

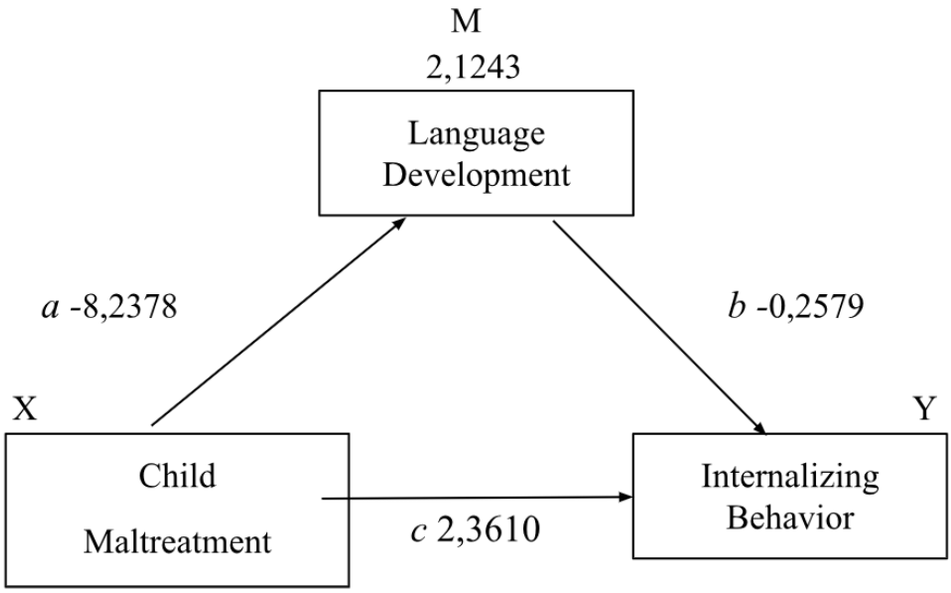


Table 1.
Descriptive statistics

	Mean CMG	SD CMG	Mean CG	SD CG	P U-Mann-Whitney
Language Development	40.2	8.7	48.5	7.73	.00
Internalizing behavior	52.2	10.6	47.9	9.2	.03
Externalizing behavior	54.5	10.6	46	6.9	.00

Note. Author's elaboration

Finally, the indirect effect of language development on internalizing behaviors in pathway M was found to be significant (effect = 2.12, Boot 95% CI [0.31, 4.48]). The effect size was 0.473, indicating that 47.3% of CM's total effect on internalizing behavior is explained through language development, suggesting a moderate to strong mediation relationship.

Discussion

This study aimed to contribute to the understanding of the mediating mechanisms that explain the pervasive and generalized sequels of CM on children's and adolescents' development by studying language as a mediator in the relationship between CM and internalizing and externalizing behaviors. Although no previous literature that addresses such mediation was identified, the results of the present study are partially consistent with previous findings from correlational studies.

Correlations Between CM, Language Development, and Internalizing and Externalizing Behaviors

First, the results showed that in the studied sample, CM was significantly associated with internalizing behaviors. It is consistent with previous findings that correlate children's internalizing behaviors with the use of inconsistent discipline strategies by their caregivers, including little response to their needs and usage of corporal punishment (Balan et al., 2017). According to these authors, such caregiving behaviors can lead to difficulties in emotional regulation and increase the risk of developing mental health disorders, such as anxiety and depression. At the same time, these findings support what has been found so far in research conducted in the Colombian context. For example, Moreno et al. (2019) found that children exposed to maltreatment exhibited a high prevalence of internalizing behaviors.

On the other hand, this study showed that CM correlates significantly inversely with language development. That is to say, the greater the exposure to CM, the greater the probability of presenting language development difficulties. These findings are consistent with what was described by Bouchard et al. (2016), who conducted a meta-analysis of 23 studies and found that 65% of children aged 14-55 months with a history of child abuse and enrolled in a child protection preschool exhibited delays in language development. It is consistent with the meta-analytic findings of Kavanaugh et al. (2017), which indicate that children with a history of childhood abuse often exhibit neurocognitive deficits, such as those related to cognitive and emotional regulation, both of which are closely linked to language skills and mental health outcomes. These findings can be explained by considering that CM is usually characterized by low levels of caregivers' response to children's physical and emotional needs, including the deprivation of communicative interactions (Girard et al., 2014).

Studies indicate that children who experience violence and fear —rather than kindness and security— and who lack opportunities to express themselves within secure attachment relationships have fewer opportunities to develop their language skills. Relational experiences are critical, as they form the basis of linguistic competence (Snow, 2009; Sylvestre et al., 2015; Lum et al., 2018; Humphreys et al., 2020; Chung et al., 2023). Children suffering from CM may experience a lack of emotional and cognitive support, given that they often are criticized and rejected, emotionally neglected, and little stimulated by their parents (Hornor, 2012). These adverse effects of CM may persistently alter the maturation processes (De Bellis et al., 2002), leading to long-term socioemotional and cognitive difficulties, including deficits in language development.

Moreover, according to what was found by Salmon et al. (2016), children with alterations in their linguistic development often present difficulties in recognizing and understanding their own emotions and those of others. The authors explain that recognition and understanding of emotions are critical for developing and maintaining social

relationships based on empathy and appropriate emotional communication and expression; likewise, alterations in these capacities are associated with internalizing problems. Thus, adequate language development is an essential factor for optimal socio-affective development in children.

However, in the present study, no statistically significant correlations were found between language development and externalizing behaviors in either group, leading to the rejection of mediation hypothesis 1 (Figure 1). This result differs from findings in other investigations where inadequate language development has correlated significantly with the emergence of externalizing behaviors in children, particularly those with a history of CM (Bress et al., 2013; Borenstein et al., 2014; Chow & Wehby, 2018; Hentges, 2021). This discrepancy may be explained by the presence of other mediating variables between maltreatment and externalizing behaviors in the present sample, such as deficits in impulse control development and stress response strategies (Kim et al., 2009; Heleniak et al., 2016), heightened reactivity, or exposure to specific parenting styles (Ruiz-Hernández et al., 2019). Therefore, it is relevant to consider these factors as specific mediators in future research.

The Mediating Role of Language in Internalizing Behaviors

Additionally, the present study found that CM is significantly associated with internalizing behaviors through its impact on language development, confirming mediation. These results are consistent with findings from Bornstein et al. (2014) and Flouri et al. (2014), who explain that language skills are a strong predictor of emotional and behavioral regulation in children because they function as tools to discriminate their emotional states and find solutions to stressful situations. In agreement, Sheridan & McLaughlin's (2020) and Hentges et al. (2021) observe that children with speech or language disorders frequently exhibit internalizing emotional and behavioral problems.

Thus, the present study supports the notion that language development serves as a promoting factor for the adequate socio-emotional development of children and adolescents and as a risk factor for the development of internalizing psychopathologies, such as depression and anxiety (Hentges et al., 2021). Therefore, early language interventions could help prevent the development of emotional and behavioral disorders in children and adolescents (Kerns et al., 2014; Greenwald et al., 2015; Rohde et al., 2016), especially in those affected by ACEs, such as CM.

Previous studies have shown that the development of linguistic skills represents a protective factor for children exposed to poverty (Flouri et al., 2014), which is a highly prevalent ACE in low- and middle-income countries. This protective effect could be explained by considering that language promotes the child's connection with their psychosocial and cultural context, which, in turn, boosts their abilities to adapt and develop tools to satisfy their needs. In the context of vulnerability in which children with ACEs live (Meza-Cueto & Navarro-Villamizar, 2022), such abilities can represent a way to overcome adversity and its consequences in both cognitive and emotional development.

Finally, it is essential to highlight the role of language development in child psychopathology, particularly for children exposed to CM. As previously mentioned, Vygotsky (1987) proposed that inner speech is a fundamental tool for developing self-regulation skills (Stanley et al., 2011). Inner speech is the internalized, self-directed speech that serves as a self-regulatory tool for thinking, planning, and self-organization; it is highly dependent on language development (Wallace et al., 2009). When impairments or delays occur in the internalizing of speech, there may be implications for behavioral self-regulation, metacognition, self-awareness, and self-understanding (Morin, 2005; Winsler & Naglieri, 2003).

Based on the results reported in this study, further exploration of the mechanisms underlying

the effect of CM on internalizing problems would be valuable. The impact of impaired language development in children who have experienced CM appears to extend beyond the difficulties in expressing themselves and is rather deeply related to other higher-order cognitive skills, such as inner speech, which seems to have a profound impact on child psychopathology.

Scope, Limitations, and Future Directions

The present study provides valuable results for understanding the mechanisms underlying the effect of CM on the development of child psychopathologies and, consequently, for the design of promotion and prevention strategies for mental health in children and adolescents in vulnerable contexts. Furthermore, this research provides preliminary information on child victims of maltreatment in Colombia, which serves to address the literature gaps regarding the study of ACEs in low and middle income countries.

Although the results are promising and largely consistent with previous research, it is essential to recognize that, due to the methodological design, limited representativeness, and small sample size, the conclusions are specifically valid for children and adolescents within the Colombian Child Protective Services system. These findings may be cautiously generalized to populations in other Latin American countries provided they have similar cultural and socioeconomic contexts to the present sample but should not be generalized outside the population studied without conducting additional research. In this regard, it is pertinent to consider some limitations.

First, the study did not differentiate among specific types of CM, instead analyzing it as a global variable. This approach does not allow us to determine if the mediating effect of language varies depending on the type of maltreatment experienced or if said type has a greater impact on internalizing behaviors. Similarly, some participant variables that could be relevant, such as the age of onset and duration of exposure to maltreatment, were not included in the analysis. In this regard, future research should consider these variables to deepen the understanding of language's mediating role in internalizing problems and the influence of CM on this relationship.

Furthermore, due to its cross-sectional design, the present study does not allow us to observe how CM and language development interact over time, which restricts the possibility of establishing solid causal relationships between CM and internalizing or externalizing behaviors. Therefore, it would be valuable for future studies to investigate, through longitudinal designs, the interactions between language development and internalizing behaviors of child victims of CM over time.

As stated above, the findings of this study are particularly relevant to children and adolescents exposed to CM and experiencing socioeconomic vulnerability, especially within the Colombian context, but they cannot be generalized as they were obtained through a quasi-experimental design and non-random sampling. In this regard, future research could be carried out in other regions of Colombia and Latin America to determine whether the observed mediation effect is present in other populations with CM problems like those in the Colombian context. Replications would be especially useful to determine the exact relationship between CM, language development, and externalizing behavior, the above considering the mixed evidence found. In this sense, increasing the sample size and employing probability sampling in the selection of participants could improve the representativeness of the sample and strengthen the generalizability of possible findings.

To not affect the pattern of results, it would be important to preserve the age range of participants and the contexts from which they are selected, such as child protection institutions and community organizations.

Finally, regarding measurement instruments, it would be interesting for future research to analyze the convergent validity of these findings

by implementing other linguistic development assessments, such as the Test of Language Development (TOLD-4) for English-speaking populations or the Objective and Criterial Language Battery (BLOC) for Spanish-speaking populations.

Conclusions

This study aimed to contribute to the growing body of knowledge on the consequences of CM on children's cognitive, emotional, and behavioral development by analyzing the mediating effect of language development on the relationship between CM and internalizing and externalizing behaviors. Based on the findings, the following conclusions can be drawn:

1. CM significantly predicts the presence of internalizing behaviors in children.
2. This relationship can be explained through the mediation of language development, which means that, through the negative impact on language development, CM affects children's ability to express their emotions and thoughts and this, in turn, is associated with the emergence of internalizing behaviors.
3. Inner speech may be a crucial variable to include in future studies seeking to understand the mechanisms underlying the effects of CM on internalizing problems and the mediation role of language development in this relationship.
4. Further research is required to explore additional variables that could help to understand whether this mediation effect also applies to externalizing behaviors, as no significant findings were observed in this study.
5. The study provides preliminary evidence suggesting that early language development interventions for child victims of maltreatment may be effective in reducing internalizing behaviors. This has important implications for public health and, in particular, for child protection agencies responsible for restoring children's rights in Colombia, Latin America, and beyond.

In this sense, prevention programs with the population should focus on developing language skills related to emotional processing, such as discrimination, nomination, and verbal expression, as these abilities facilitate subsequent emotion regulation (Girard et al., 2014; Moreno et al., 2020; Hentges et al., 2021). Moreover, programs should encourage verbal interaction between family members or institutional caregivers and children through play-based activities, which could foster emotional expression in a safe environment.

For children with a history of maltreatment, engaging in communicative activities that help them verbalize their needs and emotions in appropriate ways —such as role-playing exercises— can promote the learning of alternative strategies to internalizing and externalizing behaviors (Lum et al., 2015; Hentges et al., 2021). Furthermore, creating spaces where children can interact with peers through linguistic activities, such as simple debates or cooperative games, can help them develop skills to better manage interpersonal conflicts. Finally, educational curricula for children affected by CM should integrate activities that improve both comprehension and verbal production, supporting their cognitive, social, and emotional integration.

References

Achenbach, T. M., & Edelbrock, C. (1983). *Child behavior checklist (*CBCL*)*. Burlington: University of Vermont, Department of Psychiatry.

Achenbach, T. M., Dumenci, L., & Rescorla, L. A. (2001). Ratings of relations between DSM-IV diagnostic categories and items of the CBCL/6-18, TRF, and YSR. *Burlington,* VT*: University of Vermont* (pp 1–9).

Achenbach, T. M., Ivanova, M. Y., Rescorla, L. A., Turner, L. V., & Althoff, R. R. (2016). Internalizing/externalizing problems: Review and recommendations for clinical and research applications. *Journal of the American Academy of Child & Adolescent Psychiatry*, *55*(8), 647–656.

Alink, L. R., Cicchetti, D., Kim, J., & Rogosch, F. A. (2009). Mediating and moderating processes in the relation between maltreatment and psychopathology: Mother-

child relationship quality and emotion regulation. *Journal of Abnormal Child Psychology*, *37*(6), 831–843. https://doi.org/10.1007/s10802-009-9314-4

Amaro Hurtado, F. (2018). Maltrato infantil y neurociencias. *Diagnóstico*, *57*(3), 143–147.

Arán-Filippetti V, López MB. (2016) Predictores de la Comprensión Lectora en Niños y Adolescentes: El rol de la Edad, el Sexo y las Funciones Ejecutivas. *Cuad Neuropsicol / Panam J Neuropsychol*, *10*, 23–45.

Aviles C, Madariaga P, Reinbach Hoffman K. (2018) Estudio comparativo de funciones neuropsicológicas a los 8 años de niños prematuros y nacidos a término. *Rev Chil Pediatr*, *89*(4), 471–476. https://doi.org/10.4067/S0370-41062018005000602

Balan, R., Dobrean, A., Roman, G. D., and Balazsi, R. (2017). Indirect effects of parenting practices on internalizing problems among adolescents: the role of expressive suppression. *J. Child Family Stud*, *26*, 40–47. doi:10.1007/s10826-016-0532-4

Baixauli-Fortea, S., D'Angelo, R., & Colomer, C. (2015). Pragmatic language abilities in children with autism spectrum disorder: A relationship with cognitive and behavioral factors. *Journal of Autism and Developmental Disorders, 45*(9), 2682–2694. https://doi.org/10.1007/s10803-015-2457-3

Blum, R. W., Li, M., & Naranjo-Rivera, G. (2019). Measuring adverse child experiences among young adolescents globally: relationships with depressive symptoms and violence perpetration. *Journal of Adolescent Health, 65*(1), 86–93. https://doi.org/10.1016/j.jadohealth.2019.01.020.

Bordin, I. A., Rocha, M. M., Paula, C. S., Teixeira, M. C. T., Achenbach, T. M., Rescorla, L. A., & Silvares, E. F. (2013). Child Behavior Checklist (CBCL), Youth Self-Report (YSR), and Teacher's Report Form (TRF): an overview of the development of the original and Brazilian versions. *Cadernos de Saúde* Pública, *29*, 13–28. https://doi.org/10.1590/S0102-311X2013000100004

Bornstein, M. H., Hahn, C. S., Putnick, D. L., & Suwalsky, J. T. (2014). Stability of core language skill from early childhood to adolescence: A latent variable approach. *Child Development*, *85*, 1346–1356. https://doi.org/10.1111/cdev.12192

Bouchard, C., Sylvestre, A., & Bussieres, E.-L. (2016). Language Problems Among Abused and Neglected Children: A Meta-Analytic Review. *Child Maltreatment, 21*(1), 47–58. https://doi.org/10.1177/1077559515616703

Bress, J. N., Meyer, A., & Hajcak, G. (2013). Differentiating anxiety and depression in children and adolescents: Evidence from event-related brain potentials. *Journal of Clinical Child & Adolescent Psychology*, *44*, 238–249. https://doi.org/10.1080/15374416.2013.814544

Centers for Disease Control and Prevention. (2019). Adverse Childhood Experiences (ACEs). Preventing early trauma to improve adult health. CDC *Vital Signs*. Retrieved from https://www.cdc.gov/violenceprevention/aces/resources.html

Chow, J. C., & Wehby, J. H. (2018). Associations between language and problem behavior: A systematic review and correlational meta-analysis. *Educational Psychology Review*, *30*, 61–82. https://doi.org/10.1007/s10648-016-9385-z

Chung, M. K., Azizi, T., Hanson, J. L., Alexander, A. L., Davidson, R. J., & Pollak, S. D. (2023). Altered topological structure of the brain white matter in maltreated children through topological data analysis. arXiv preprint arXiv:2304.05908.

Cobos-Cali, M., Ladera, V., Perea, M. V., & García, R. (2017). Language disorders in victims of domestic violence in children's homes. *Child Abuse & Neglect*. doi:10.1016/j.chiabu.2017.02.028

Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., van der Kolk, B. (2005). Complex Trauma in Children and Adolescents. *Psychiatric Annals*, 390-398.

Cuartas, J., Grogan-Kaylor, A., Ma, J. & Castillo, B. (2019). Civil conflict, domestic violence, and poverty as predictors of corporal punishment in Colombia. *Child Abuse & Neglect, 90*, 108-119.

Cuartas, J. (2022). Violencia contra niños, niñas y adolescentes: etiología, consecuencias y estrategias para su prevención. *Documentos de Gobierno Alberto Lleras Camargo*. Universidad de los Andes.

Cummings, M., & Berkowitz, S. J. (2014). Evaluation and treatment of childhood physical abuse and neglect: a review. *Curr. Psychiatry Rep*. 16:429. doi:10.1007/s11920-013-0429-5

De Bellis, M. D., Keshavan, M. S., Shifflett, H., Iyengar, S., Beers, S. R., Hall, J., & Moritz, G. (2002). Brain structures in pediatric maltreatment-related post-traumatic stress disorder: A sociodemographically matched study. *Biological Psychiatry*, 52, 1066–1078. doi:10.1016/S0006-3223(02)01459-2

De Bellis, M. D., Woolley, D. P., & Hooper, S. R. (2013). Neuropsychological Findings in Pediatric Maltreatment: Relationship of PTSD, Dissociative Symptoms, and Abuse/Neglect Indices to Neurocognitive Outcomes. *Child Maltreatment*, *18*(3), 171–183. https://doi.org/10.1177/1077559513497420

Deambrosio, M., Gutiérrez de Vázquez, M., Arán-Filippetti, V., & Román, F. (2017). Efectos del Maltrato en la Neurocognición. Un Estudio en Niños Maltratados Institucionalizados y no Institucionalizados. *Revista Latinoamericana De Ciencias Sociales, Niñez Y Juventud*, *16*(1), 239–253. https://doi.org/https://doi.org/10.11600/1692715x.16114

Devries, K., Merrill, K. G., Knight, L., Bott, S., Guedes, A., Butron-Riveros, B., Hege, C., Petzold, M., Peterman, A., Cappa, C., Maxwell, L., Williams, A., Kishor, S., & Abrahams, N. (2019). Violence against children in Latin America and the Caribbean: What do available data reveal about prevalence and perpetrators. *Revista panamericana de salud pública = Pan American journal of public health*, 43. https://doi.org/10.26633/rpsp.2019.66

Díaz-Aguado, M. (2001). El maltrato infantil. *Revista de Educación (España)* (325), 143–160.

Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychological Inquiry*, 9, 241–273.

Fernández, G., Farina, P., Arráiz, C., & Troya, E. (2020). Consecuencias del maltrato infantil en un hospital de Maracaibo-Venezuela. *Revista de Ciencias Sociales*, XXVI (1), 187–202.

Flouri, E., Midouhas, E., & Joshi, H. (2014). Family poverty and trajectories of children's emotional and behavioral problems: The moderating roles of self-regulation and verbal cognitive ability. *Journal of Abnormal Child Psychology*, *42* (6), 1043–1056. https://doi.org/10.1007/s10802-013-9848-3

Girard, L., Pingault, J., Falissard, B., Boivin, M., Dionne, G., & Tremblay, R. E. (2014). Physical Aggression and Language Ability from 17 to 72 Months: Cross-Lagged Effects in a Population Sample. *Plos One*, 9(11), 1–8 https://doi.org/10.1371/journal.pone.0112185

Granados, A. V., Sabogal, J. C., Muñoz, P., Caicedo, J. C., Martínez-Cotrina, J., & Canencio, M. A. (2021). Ethogram of non-verbal behaviors associated with emotional regulation and stress response in children and adolescents with complex trauma. *Behavior*, *158*(14-15), 1421-1448.

Greenwald, A. G., Banaji, M. R., & Nosek, B. A. (2015). Statistically small effects of the Implicit Association Test can have societally large effects. *Journal of Personality and Social Psychology*, 108, 553–561. https://doi.org/10.1037/pspa0000016

Haslam, D., et al. (2023). *The Australian Childhood Maltreatment Study: Prevalence and health impacts.* Retrieved from https://outcomes.org.au/resource/the-australian-childhood-maltreatment-study

Hayes, S. C., & Hofmann, S. G. (Eds.). (2018). Process-based CBT: The science and core clinical competencies of cognitive behavioral therapy. *New Harbinger Publications*.

Heleniak, C., Jenness, J. L., Stoep, A. V., McCauley, E., & McLaughlin, K. A. (2016). Childhood maltreatment exposure and disruptions in emotion regulation: A transdiagnostic pathway to adolescent internalizing and externalizing psychopathology. *Cognitive Therapy and Research*. https://doi.org/10.1007/s10608-015-9735-z

Hentges, R. F., Devereux, C., Graham, S. A., & Madigan, S. (2021). Child language difficulties and internalizing and externalizing symptoms: A meta-analysis. *Child Development*, 1–25. https://doi.org/10.1111/cdev.13540

Hornor, G. (2012). Emotional maltreatment. *Journal of Pediatric Health Care*, 26, 436–442. doi.org/10.1016/j.pedhc.2011.05.004

Humphreys, K. L., Sheridan, M. A., Drury, S. S., McLaughlin, K. A., & Nelson, C. A. (2020). Early adversity and developmental outcomes: What can we learn from biological processes? Pediatrics, *145*(4). https://doi.org/10.1542/peds.2019-0204

Instituto Nacional de Medicina Legal y Ciencias Forenses. (2023). *Forensis 2022: datos para la vida*, *24* (1). https://www.medicinalegal.gov.co/documents/20143/989825/Forensis_2022.pdf

Inter-American Commission on Human Rights. (2020, April 27). IACHR *warns of the effects of the* COVID-*19 pandemic on children and adolescents*. Retrieved from http://www.oas.org/en/iachr/media_center/preleases/2020/090.asp

Kavanaugh, B. C., Dupont-Frechette, J. A., Jerskey, B. A., & Holler, K. A. (2017). Neurocognitive deficits in children with a history of childhood abuse: A meta-analysis. *Journal of Child & Adolescent Trauma, 10*(4), 397–410.

Kim, J., Cicchetti, D., Rogosch, F. A., & Manly, J. T. (2009). Child maltreatment and trajectories of personality and behavioral functioning: Implications for the development of personality disorder. *Development and Psychopathology*, *21*(03), 889. https://doi.org/10.1017/s0954579409000480

Lindsay G., Dockrell J., Law J. & Roulstone S. (2012). The Better Communication Research Programme: Improving provision for children and young people with speech, language and communication needs. *Department for Education*.

Lum, J. A. G., Powell, M., Timms, L., & Snow, P. (2015). A meta-analysis of cross-sectional studies investigating language in maltreated children. *Journal of Speech, Language, and Hearing Research, 58*(3), 961–976. https://doi.org/10.1044/2015_jslhr-L-14-0056

Maughan, A., & Cicchetti, D. (2002). Impact of child maltreatment and interadult violence on children's emotion regulation abilities and socioemotional adjustment. *Child Development, 73*(5), 1525–1542. https://doi.org/10.1111/1467-8624.00488

Matute, Esmeralda & Inozemtseva, Olga & González-Reyes, Ana & Chamorro, Yaira. (2014). La Evaluación Neuropsicológica Infantil (eni): Historia y fundamentos teóricos de su validación. Un acercamiento práctico a su uso y valor diagnóstico. *Revista Neuropsicología, Neuropsiquiatría y Neurociencias*, 14, 68–95.

McDonald J. L., Milne S., Knight J. & Webster V. (2013). Developmental and behavioral characteristics of children enrolled in a child protection pre-school. *Journal of Paediatrics and Child Health*, *49*, E142–E146. https://doi.org/10.1111/jpc.12029

McDonnell, C. G., Weissman, D. G., & Sheridan, M. A. (2019). Child maltreatment and emotion regulation: Neural systems and psychopathology. *Journal of the American Academy of Child & Adolescent Psychiatry*, *58*(9), 799–806. https://doi.org/10.1016/j.jaac.2019.06.019

Meza-Cueto, L. & Navarro-Villamizar, D. (2022). Maltrato infantil según las características sociodemográficas de las madres en Sucre, Colombia. *Ipsa Scientia, Revista Científica Multidisciplinaria*, *7*(2), 24–35. https://doi.org/10.25214/27114406.1410

Milojevich, H. M., Levine L. J., Cathcart E. J., & Quas J. A. (2018). The role of maltreatment in the development of coping strategies. *Journal of Applied Developmental Psychology*, *54*, 23–32. https://doi.org/10.1016/j.appdev.2017.10.005

Moog, N. K., Cummings, P. D., Jackson, K. L., Aschner, J. L., Barrett, E. S., Bastain, T. M., Blackwell, C. K., Bosquet Enlow, M., Breton, C. V., Bush, N. R., Deoni, S. C. L., Duarte, C. S., Ferrara, A., Grant, T. L., Hipwell, A. E., Jones, K., Leve, L. D., Lovinsky-Desir, S., Miller, R. K., Monk, C., Oken, E., Posner, J., Schmidt, R. J., Wright, R. J., Entringer, S., Simhan, H. N., Wadhwa, P. D., O'Connor, T. G., Musci, R. J., Buss, C., & echo collaborators. (2023). Intergenerational transmission of the effects of maternal exposure to childhood maltreatment in the usa: A retrospective cohort study. *The Lancet Public Health, 8*(3), e226-e237. https://doi.org/10.1016/S2468-2667(22)00387-6

Morales, J. (2021). Maltrato infantil. Una mirada al interior de la familia en tiempos de confinamiento social. *InterAmerican Journal of Medicine and Health*, *4*, 1–5. https://doi.org/10.31005/iajmh.v4i.177

Moreno Méndez, J. H., Espada Sánchez, J. P., & Gómez Becerra, I. (2019). Avances sobre estilos educativos parentales predictores de comportamientos internalizantes y externalizantes en niños. *Universitas Psychologica*, *18*(5), 1–10. https://doi.org/10.11144/Javeriana.upsy18-5.apes

Moretti, M. M., & Craig, S. G. (2013). Maternal versus paternal physical and emotional abuse, affect regulation and risk for depression from adolescence to

early adulthood. *Child Abuse & Neglect*, *37*(1), 4–13. https://doi.org/10.1016/j.chiabu.2012.09.015

Morin, A. (2005). Possible links between self-awareness and inner speech: Theoretical background, underlying mechanisms, and empirical evidence. *Journal of Consciousness Studies*, 12, 115–134.

Muñoz, P. & Caicedo, J.C. (2018). *Encuesta Sociodemográfica y de Salud* [manuscrito inédito]. Universidad Externado de Colombia.

Nivard, M., Lubke, G., Dolan, C., Evans, D., St. Pourcain, B., Munafò, M., & Middeldorp, C. (2017). Joint developmental trajectories of internalizing and externalizing disorders between childhood and adolescence. *Development and Psychopathology*, *29*(3), 919–928. https://doi.org/10.1017/S0954579416000572

Norman, R. E., Byambaa, M., De, R., Butchart, A., Scott, J., & Vos, T. (2012). The long-term health consequences of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis. *plos Medicine*, *9*(11). https://doi.org/10.1371/journal.pmed.1001349

Oviedo-Tovar, N., Sánchez-Ramírez, L., Quintero-Padilla, A., Agredo-Morales, J., & Latorre-Arias, N. (2021). Resiliencia como factor protector para mitigar el parasuicidio en los adolescentes de Ibagué, Colombia. *Ipsa Scientia, Revista Científica Multidisciplinaria*, *6*(4), 60–80. https://doi.org/10.25214/27114406.1128

Patalay, P., Moulton, V., Goodman, A., & Ploubidis, G. B. (2017). Cross-domain symptom development typologies and their antecedents: Results from the uk millennium cohort study. *Journal of the American Academy of Child and Adolescent Psychiatry*, *56*, 765–776. https://doi.org/10.1016/j.jaac.2017.06.009

Pérez Lalama, K. G. (2015). *Estudio comparativo del perfil neuropsicológico de niños de 7 a 12 años de edad rurales y céntricos afectados por la contaminación del plomo en la parroquia la Victoria – Provincia de Cotopaxi* [Tesis maestría en Neuropsicología Clínica y Rehabilitación Neuropsicológica]. Instituto de Investigación y Postgrado. Quito: UCE.

Pérez, B. H., & Díaz, A. F. (2022). Lo invisible del maltrato infantil: ¿Puede modificar la expresión génica? *remus-Revista Estudiantil de Medicina de la Universidad de Sonora*, 16-25.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*(3), 879–891. https://doi.org/10.3758/brm.40.3.879

Reina Delgado, A. V., Moreno Cáceres, A. E., & Campillo Herrera, H. J. (2022). *Efectos del maltrato infantil en el desarrollo emocional de niños y niñas de 3 a 6 años* [Tesis doctoral]. Corporación Universitaria Minuto de Dios-uniminuto.

Rescorla, L., Ivanova, M. Y., Achenbach, T. M., Begovac, I., Chahed, M., Drugli, M. B., Zhang, E. Y. (2012). International epidemiology of child and adolescent psychopathology ii: Integration and applications of dimensional findings from 44 societies. *Journal of the American Academy of Child & Adolescent Psychiatry*, *51*(12). doi:10.1016/j.jaac.2012.09.012.

Rohde, N., Tang, K. K., Osberg, L., & Rao, P. (2016). The effect of economic insecurity on mental health: Recent evidence from Australian panel data. *Social Science & Medicine*, *151*, 250–258. https://doi.org/10.1016/j.socscimed.2015.12.014

Rosselli, M., Matute, E., & Beltrán-Navarro, M. B. (2021). La Relevancia de la Evaluación Neuropsicológica en el Niño de Edad Preescolar. *Revista Neuropsicología, Neuropsiquiatría y Neurociencias*, *21*(1), 43-62.

Ruiz-Hernández, J. A., Moral-Zafra, E., Llor-Esteban, B., & Jiménez-Barbero, J. A. (2019). Influence of parental styles and other psychosocial variables on the development of externalizing behaviors in adolescents: A systematic review. *The European Journal of Psychology Applied to Legal Context*, *11*, 9–21 http://dx.doi.org/10.5093/ejpalc2018a11

Salmon K., O'Kearney R., Reese E., & Fortune C. A. (2016). The role of language skill in child psychopathology: Implications for intervention in the early years. *Clinical Child and Family Psychology Review, 19*, 352–367. https://doi.org/10.1007/s10567-016-0214-1

Shenk, C., Griffin, A., & O'Donnell, K. (2015). Symptoms of major depressive disorder subsequent to child maltreatment: Examining change across multiple levels of analysis to identify transdiagnostic risk pathways. *Development and Psychopathology*, *27*(4pt2), 1503–1514. https://doi.org/10.1017/S0954579415000905

Sheridan, M. A., & McLaughlin, K. A. (2020). Neurodevelopmental mechanisms linking aces with psychopathology. *Annual Review of Clinical Psychology*, *16*, 381–406. https://doi.org/10.1146/annurev-clinpsy-071819-015836

Snow, P. C. (2009). Child Maltreatment, mental health and oral language competence: Inviting speech-language pathology to the prevention table. *International Journal of Speech-Language Pathology*, 11(2), 95–103.

St Clair, M. C., Pickles, A., Durkin, K. & Conti-Ramsden, G. (2011). A longitudinal study of behavioral, emotional and social difficulties in individuals with a history of specific language impairment (sli). *Journal of Communication Disorders*, *44*(2), 186–199. https://doi.org/10.1016/j.jcomdis.2010.09.004

Stanley, N., Miller, P., Foster, H. R., & Thomson, G. (2011). Children's Experiences of Domestic Violence: Developing an Integrated Response From Police and Child Protection Services. *Journal of Interpersonal Violence*, *26*(12), 2372–2391. https://doi.org/10.1177/0886260510383030

unicef. (2024). In Latin America and the Caribbean, almost two out of every three children and adolescents between the ages of 1 and 14 have experienced some form of violent discipline at home, including physical punishment and psychological aggression. Retrieved from https://www.unicef.org/lac/en/press-releases/nearly-400-million-young-children-worldwide-experience-violent-discipline

Valsiner, J., & Van der Veer, R. (2014). Zone of Proximal Development in Vygotsky's theory: New insights and developments. In A. Yasnitsky, R. Van der Veer, & M. Ferrari (Eds.), *The Cambridge Handbook of Cultural-Historical Psychology* (pp. 148–172). Cambridge University Press. https://doi.org/10.1017/cbo9781139028097.011

Vilariño, M., Amado, B.G., Vázquez, M. J., & Arce, R. (2018). Psychological harm in women victims of intimate partner violence: Epidemiology and quantification of injury in mental health markers. *Psychosocial Intervention*, *27*, 145–152. https://doi.org/10.5093/pi2018a23

Vygotsky, L. (1987). *Pensamiento y lenguaje teoría del desarrollo cultural de las funciones psíquicas*. Buenos Aires.

Wallace, G. L., Silvers, J. A., Martin, A., & Kenworthy, L. E. (2009). Brief report: Further evidence for inner speech deficits in autism spectrum disorders. *Journal of Autism and Developmental Disorders*, *39*, 1735–1739. http://dx.doi.org/10.1007/s10803-009-0802-8

Winsler, A., De León, J. R., Wallace, B. A., Carlton, M. P., & Willson-Quayle, A. (2003). Private speech in preschool children: Developmental stability and change, across-task consistency, and relations with classroom behavior. *Journal of Child Language*, *30*, 583–608. http://dx.doi.org/10.1017/S0305000903005671

World Health Organization (WHO) (2006). *Preventing Child Maltreatment: a guide to taking action and generating evidence*. World Health Organization and International Society for Prevention of Child Abuse and Neglect. Retrieved from https://apps.who.int/iris/handle/10665/43499

World Health Organization (WHO) (2022). *Responding to Child Maltreatment: a clinical handbook for health professionals*. WHO.

Yasnitsky, A. (2018). *Vygotsky: An intellectual biography.* Routledge. https://doi.org/10.4324/9781315110763

Yew S. G. K., & O'Kearney R. (2015). The role of early language difficulties in the trajectories of conduct problems across childhood. *Journal of Abnormal Child Psychology*, *43*(8), 1515–1527. https://doi.org/10.1007/s10802-015-0040-9

doi: https://doi.org/10.15446/rcp.v34n2.106721

Comparison in Socioemotional Development in Chilean and the U.S. Children

Nancy Espinosa Díaz
Universidad Católica del Maule

Chamarrita Farkas
Pontificia Universidad Católica de Chile

Claire Vallotton
Michigan State University, USA

Claudio Rojas-Jara
Universidad Católica del Maule, Chile

How to cite this article: Espinoza- Diaz, N. (2025). Comparison in Socioemotional Development in Chilean and the U.S. Children. *Revista Colombiana de Psicología*, *34*(2), 99-113. https://doi.org/10.15446/rcp.v34n2.106721

Correspondence: Nancy Espinosa Díaz (https://orcid.org/0000-0002-7086-2648). Email: nespinosa@ucm.cl

SCIENTIFIC RESEARCH ARTICLE

RECEIVED: JANUARY 13TH, 2023 - ACCEPTED: SEPTEMBER 03TH, 2024

Comparison in Socioemotional Development in Chilean and the U.S. Children

Abstract

Children's socioemotional development (SED) refers to their ability to regulate emotions and behavior to adapt to the world in which they live. Few studies have examined the impact of cultural differences. This study aims to describe and compare the relationship between socioemotional development in Chilean and U.S. children, analyzing the predictive value of cultural differences. The sample consisted of 142 mother-child dyads. Results showed significant differences in children's socioemotional development between the two countries, mediated by maternal education.

Keywords: socioemotional development, early infancy, different contexs.

Comparación del desarrollo socioemocional en niños chilenos y estadounidenses

Resumen

El desarrollo socioemocional (DSE) de los niños se refiere a su capacidad de regular las emociones y el comportamiento para adaptarse al mundo en el que viven. Pocos estudios han examinado el impacto de las diferencias culturales. Este estudio pretende describir y comparar la relación entre el desarrollo socioemocional en niños chilenos y estadounidenses, analizando el valor predictivo de las diferencias culturales. La muestra consistió en 142 díadas madre-hijo. Los resultados mostraron diferencias significativas en el desarrollo socioemocional de los niños entre ambos países, mediadas por la educación materna.

Palabras clave: desarrollo socioemocional, temprana infancia, diferentes contextos.

Socioemotional Development

SED is defined as the ability to recognize, distinguish, manage, and express emotions, develop close and satisfying relationships as well as the ability to actively explore the environment (Cohen et al., 2005). It is the process through which children learn social and emotional skills, how to apply them in daily life and it is shaped upon the influence by personal traits, socialization, and cultural factors (Chen & Rubin, 2011; Greenspan & Shanker, 2004; Greenspan & Wieder, 2006). These skills include abilities such as understanding own and others' emotional states as well as regulation of emotions and behaviors (Perner, 1994). Additionally, SED enables emotional and behavioral management to achieve goals (Campos et al., 1994) and engage in positive social interactions (Raver & Zigler, 1997). Additionally, children who achieve adequate SED are able to express their emotions properly, communicate better with peers (Bayley, 2006; Thompson, 1991) and are perceived more positively by their parents (Vallotton, 2008, 2012). In contrast, children with socioemotional difficulties engage in more disruptive behaviors, throw tantrums more often and have difficulties communicating with their parents (Farkas, 2007). Thus, SED is fundamental to overall child development, as it allows children to adapt and interact with social environment's demands and expectations (Greenspan et al., 2001; Greenspan & Shanker, 2004; Perner, 1994).

Although research indicates that SED is influenced by children's characteristics, such as communication skills and gender (e.g., Vallotton & Ayoub, 2011), some controversies remain. On one hand, Bradley et al. (2001) reported greater emotional reactivity in girls and a higher frequency of delays in early SED among boys. On the other hand, Else-Quest et al. (2006) found gender-based socioemotional developmental differences in early childhood, attributing the magnitude of these differences to variations in socialization and cultural processes.

The literature highlights how early experiences with primary caregivers influence SED. Particularly, studies show that caregivers' sensitivity, responsiveness, and co-regulation strategies enhance children's SED (Klebanov et al., 1994; Page et al., 2010; Spinrad et al., 2007). While experiences during a child's first twelve months constitute the foundation of SED (Sroufe, 2000), it is from late infancy that children's social and emotional skills become increasingly evident (Brownell & Kopp, 2007; Vallotton & Ayoub, 2011). Specifically, during toddlerhood, children's participation, understanding, and internalization of cultural practices become more extensive. Simultaneously, regulatory strategies allow children to align their behavior with social and cultural norms, making it possible to predict long-term SED trajectories (Brophy-Herb et al., 2015; Brownell & Kopp, 2007; Tremblay et al., 2004).

Moreover, studies have identified parental education and socioeconomic status (SES) as relevant predictors of mother-child interactions (Klebanov et al., 1994; Olhaberry & Santelices, 2013) and children's SED (Bornstein & Bradley, 2003). Particularly, higher education and middle- to high-SES have been associated with better SED outcomes (Dodge et al., 1994; Klebanov et al., 1994; Metwally et al., 2015). Comprehensively, it has been proposed that as a result of having more education, mothers would exhibit greater confidence, knowledge and strategies to address parenting tensions and conflicts (Fox et al., 1995). Thus, these mothers with more years of education would feel better equipped to support their children in problem-solving (Neitzel & Stright, 2004), employ more complex scaffolding strategies, exhibit a more positive parenting style, respond more sensitively to their children's signs and needs (Mermelshtine & Barnes, 2016), and effectively teach emotion regulation and coping strategies (Denham et al.,

1997). Notably, Chilean mothers have shown significantly lower levels of education when compared to their U.S. counterparts (OCDE, 2016).

Cultural variations in socioemotional development

As previously noted, socioemotional skills begin to develop during an infant's earliest interactions with caregivers. During these exchanges, children learn to interpret and respond to emotional and social cues, which in turn allow them to organize their experiences (Greenspan & Wieder, 2006). Thus, parents socialize their offspring based on its norms and values, fostering knowledge of emotional expression, the importance of interpersonal sensitivity as well as the consideration of the context as a background of their behavior (Bronfenbrenner, 1979; Chan et al., 2009; Keller, 2012; Super & Harkness, 1986; Wang & Leichtman, 2000). Consequently, parenting is a strongly culture-bound variable, which conveys norms, values, and practices of specific social groups (Keller et al., 2009; Matsumoto & Juang, 2008), which in turn influence children's SED (Stevenson-Hinde, 2011).

Most research on cultural differences in children's SED has focused on comparisons between Eastern and Western countries (Camras et al., 2006; Pettenati et al., 2012). For example, studies have reported that Asian children are less expressive of positive emotions (e.g., smiling) than their Western counterparts (Camras et al., 1998). Likewise, studies have shown more cooperativeness among Chinese, South Korean, and South American children compared to U.S. children, who exhibit greater aggressiveness and oppositional behavior (Bergeron & Schneider, 2005; Farver et al., 1995).

Historically, intercultural differences have been understood through the lens of individualism and collectivism (Hofstede, 1991, 2001; Singelis et al., 1995). While individualism emphasizes autonomy, self-sufficiency, goal orientation, competitiveness as well as individual goals and rights, collectivism accentuates interdependence, cooperation, harmony and collective aims and rights (Kulkarni et al., 2010; Markus & Kitayama, 1991). Consequently, children in different societies differ considerably in aspects regarding socioemotional functioning, such as freedom of expression, cooperation, responsibility, aggression, and shyness, highlighting the importance of describing cultural context in studying children's SED (Chen, 2011; Chen & Rubin, 2011). Specifically, the U.S. is characterized as an individualistic culture (Hofstede, 1980) in which caregiver-child interactions are more symmetrical with a horizontal base that promote children's individuality, autonomy and separation (Keller & Greenfield, 2000; Keller et al., 2004). Consequently, parents attend to the unique attributes and needs of their children, tolerating, encouraging and supporting the expression of negative emotions (e.g., anger, pride, disgust), which fosters self-sufficiency, assertiveness, and self-esteem (Fiske et al., 1998; Greenfield et al., 2003). Overall, these characteristics have been described as active promotors of children's SED (Schwab, 2013).

On the other hand, even though Chilean culture has been defined as collectivistic in comparison with the U.S., there is evidence of a current shift towards individualism, with a blend of individualistic and collectivist elements (Kolstad & Horpestad, 2009). Particularly, parents favor the acceptance of norms and obedience, where the main values that are socialized are related with cooperation and care for members of the community (Keller et al., 2004; Markus & Kitayama, 1991; Schwartz, 2006). Particularly, Chilean caregiver-child relationship is characterized by asymmetrical and hierarchical interactions in which interactional warmth supports the development of acceptance of family norms and values (Keller et al., 2004), as well as social harmony and group interests

(Matsumoto, 1991). In this sense, parents do not encourage the expression of feelings and emotions, but rather refuse, reject, criticize and/or minimize negative emotions, unquestioned obedience is expected and children's opinions are not considered (Calzada, 2010; Chao, 1995; Chen & Rubin, 2011; Wang & Leichtman, 2000). Specifically, a small but growing body of literature has identified differences between Chilean and U.S. children's SED, were the latter expressed pleasure and discomfort with higher intensity and the former exhibit greater self-regulation skills (Barata, 2011; Muzard et al., 2017).

The Present Study

Based on the aforementioned literature, the present study aims to explore children's SED within two western countries: U.S. and Chile. To achieve this goal, the association between Chilean and U.S. children's SED at 12 and 30 months will be described and compared, along with variations between these time points. Furthermore, the predictive value of each country, as well as a possible mediation role of maternal education between countries and children's SED at 30 months, will be analyzed. Based on prior literature, it is hypothesized that significant differences will be observed in children's SED between both countries, as well as a significant change in children's SED from 12 to 30 months. Additionally, it is expected that maternal education will mediate the association between countries and socio-emotional development.

The implications of this study are twofold. First, it aims to enrich existing knowledge on socioemotional development from an evolutionary perspective, recognizing that the early years of life constitute a critical and sensitive period at the neuropsychological level. During this stage, according to the literature, the foundations for later development and mental health are established (Bowlby, 1969; Stern, 2009). Therefore, this study includes factors related to parenting and early bonding within the context in which they develop, with the aim of strengthening parenting practices and child care that shape children's development. Additionally, this stage is a fertile ground for the implementation of early interventions (Knudsen, 2004; Schore, 2005), which are deeply influenced by culture (Matsumoto, 2008; Butler, 2007). On the other hand, this study aims to compare two samples, as a significant limitation in early childhood and parenting topics is that the majority of studies consistently reveal that perhaps 80-90% of the published science in these fields comes from Western Europe and North America (the "developed" world), while only about 10-20% of the global literature represents humanity from the majority ("developing") world (Tomlinson & Bornstein, 2014). Therefore, it is essential to conduct studies that include Latino populations to identify differences or find appropriate generalizations according to these studies.

Method

Design

The present study employs a nonexperimental, descriptive, longitudinal, and comparative design. It describes and compares children's socioemotional development in two different countries (Chile and the U.S.) at two distinct time points (12 and 30 months).

Participants

The study had a nonprobability, purposive sample of 142 mother-child dyads who attended daycare centers and were part of a larger study examining the relationship between children's SED and caregivers' competencies. Inclusion criteria required that mothers and children lived together, and that children's SED was assessed at 12 months. Children with severe developmental disorders and mothers with psychiatric conditions were excluded.

For the first assessment, 90 Chilean children participated (56.7% boys and 43.3% girls), aged between 10 and 15 months (M = 11.9 months, SD = 1.37). Mothers were between 15 and 44 years old (M = 27.79 years, SD = 6.74), with 47.8% holding

technical and/or university degrees. In the U.S., 52 children participated (44.2% boys and 55.8% girls), aged between 10 and 15 months (M = 12.17 months, SD = 1.44). Mothers were between 19 and 48 years old (M = 32.44 years, SD = 5.84), with 86.6% holding technical and/or university degrees (see Table 1).

For the second assessment, 70 Chilean children, aged between 27 and 32 months (M = 27.79 months, SD = 6.74), and 49 U.S. children, aged between 28 and 37 months (M = 32.44 months, SD = 5.85), were evaluated. No significant differences were found between U.S. and Chilean children in terms of age and gender. Even though mothers in the U.S. had significantly higher education levels than Chilean mothers ($X^2(6) = 39.25$, p \leq .001), Chilean mothers were significantly younger than U.S. mothers ($t(129) = -7.15$, p \leq .001). Regardless of the 16.2% (n = 23) of mother-child dyads that drop-out from the study (mainly due to changes in daycare centers or relocation), attrition analyses revealed no significant differences in SED or maternal education between those who remained and those who dropped out (see Table 1).

Table 1.
Distribution of mothers' education and children's gender

		Chile (n=90)		US (n=52)		
		f	%	*f*	%	*p*
Maternal education						≤ .000
	Elementary and middle school (incomplete)	2	2.2	0	0	
	Elementary and middle school (complete)	3	3.3	0	0	
	High school (incomplete)	12	13.3	1	1.9	
	High school (complete) and education in a technical center (incomplete)	30	33.3	6	11.5	
	Education in a technical center (complete) or associate degree	14	15.6	3	5.8	
	Bachelor's degree	21	23.3	17	32.7	
	Postgraduate degree	8	8.9	25	48.1	
Child's gender						n.s.
	Male	51	56.7	23	44.2	
	Female	39	43.3	29	55.8	

N = 142

Instruments

Sociodemographic Questionnaire

This instrument was developed by the research team to ensure that inclusion criteria were met and to collect participants' sociodemographic information.

Social-Emotional Scale (Bayley, 2006)

This scale assesses children's socioemotional development through caregivers' identification of socioemotional milestones. It includes 35 Likert-scale items, to which caregivers respond based on the frequency with which they observe each behavior in their child. Adequate reliability has been reported, ranging from 0.83 to 0.94 in U.S. children (Bayley, 2006) and 0.95 in Chilean children (Farkas, Santelices, & Himmel, 2013). In this study, reliability reached a Cronbach's alpha of 0.84.

Procedure

For data collection, contact was made with the directors of childcare centers to request their

participation. Those that met the inclusion criteria and agreed to participate were asked to sign an informed consent form, and the assessments were conducted at the childcare centers, where participants completed the Sociodemographic Questionnaire and the Social-Emotional Scale. When the children reached an age range of 27 to 33 months, the Social-Emotional Scale assessment was repeated. All necessary ethical precautions were taken throughout the process, and participants were assured that the data obtained would be used solely for research purposes.

Data Analysis

The study's first aim was to compare SED between U.S. and Chilean children at two time points (T1: 12 and T2: 30 months), as well as variations between these time points. To achieve this, ANCOVA analyses were conducted. Since children were assessed over a six-month period and raw scores were used, children's age at the time of assessment was included as a control variable. Adjustments were also made for children's sex and mothers' education. Afterwards, to analyze the change over these two time points, a delta SED variable was created by subtracting the raw SED score obtained at T1 from the raw SED score obtained at T2. Next, ANCOVA analyses were performed, controlling for children's age and sex as well as mothers' education.

For the second aim, a hierarchical regression analysis was conducted to predict country's influence on children's SED at 30 months, controlling for children's age, sex, and SED at 12 months, as well as mothers' education. Finally, a Sobel test was conducted to analyze the possible mediating role of mothers' education in the relationship between country and children's SED at T2was run. For this test, children's SED at T1 and age at T2 were controlled. Children's sex was not included, as this variable was not significant in any of the previous analyses.

Results

Descriptive Analyses of SED at Two Time Points

At 12 months, on average, children's SED yielded 74.59 points (SD = 7.843, range 50-99). Specifically, U.S. children reached 74.48 points (SD = 8.408, range 59–99), while Chilean children obtained a mean of 74.46 points (SD = 7.542, range 50–85). On the second measurement, the entire sample obtained a mean of 130.09 points (SD = 19.191, range 78–174); U.S. children scored 137.98 points (SD = 18.855, range 78–174), while Chilean children averaged 124.57 points (SD = 17.533, range 80–170).

Table 2.
Analysis of covariance of infants' SED at T1 and T2

	Time 1			Time 2		
Variables	*MS (df)*	*F*	*Sig.*	*MS (df)*	*F*	*Sig.*
Child's age (Time of assessment)	371.8 (1)	6.37	.013**	3148.7 (1)	11.21	.001
Infant's sex	0.357 (1)	0.01	.938	78.755 (1)	0.280	.598
Mother's education	259.5 (1)	4.45	.037*	3072.5 (1)	10.9	.001
Country	51.24 (1)	0.88	.350	126.1 (1)	0.45	.504

Comparison of U.S. and Chilean Children's SED

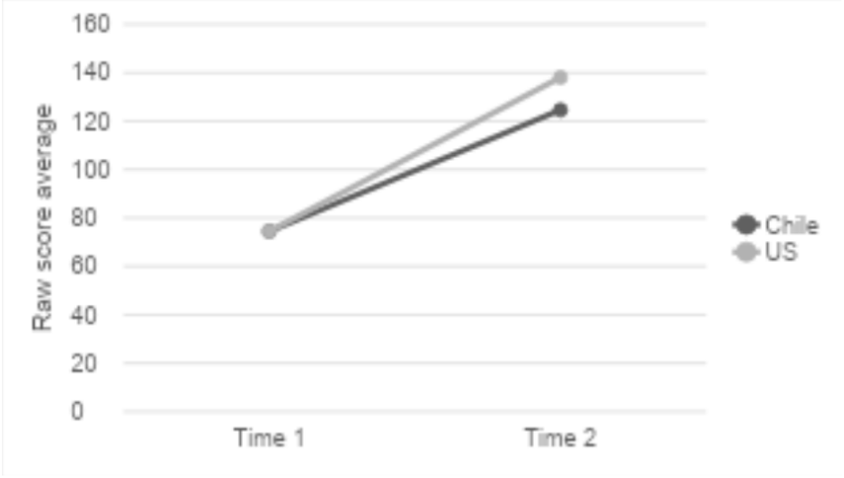
ANCOVA analyses showed no significant differences between countries at T1 and T2 after adjusting for children's age and sex as well as for maternal education (see Table 2). Particularly, the variables that explained differences in SED were maternal education at T1 (F(1, 137) = 4.447, p = .037) and at T2 (F(1, 108) = 10.940, p \leq .001), as well as children's age at T1 (F(1, 137) = 6.40, p = .013) and at T2 (F(1, 108) = 11.212, p \leq .001). These results confirmed the relevance of controlling for these variables and showed that children's SED increased as maternal education and infants' age increased.

Furthermore, a delta of change was calculated by subtracting SED at T1 from SED at T2. This was done to compare children's SED between both time points. ANCOVA analysis showed significant differences between U.S. and Chilean children ($F_{(1,}$ 117) = 15.84, p \leq .001). Specifically, U.S. children exhibited a greater increase in SED between T1 and T2 (M(Ch) = 49.86, M(US) = 65.04) (see the change between both time points in Figure 1). Moreover, these results remained significant even after adjusting for children's age, sex, and maternal education (F(1, 107) = 3.944, p = .004) (see Tables 2–3 and Figure 1).

Table 3.
ANCOVA of the SED change between T1 and T2

Variables	DF	MS	F	Sig.
Child's age T1	1	101	.37	.544
Child's age T2	1	7806	28.56	<.000
Child's sex	1	239	.87	.352
Mother's education	1	2519	9.22	.003
Country	1	1078	3.94	.004

Figure 1. Socioemotional change between T1 and T2 for both samples.



Analysis of Country's Predictive Value in Children's SED at 30 Months

A hierarchical regression analysis in which control variables were entered first was performed: SED at T1 (model 1), children's age at T2 as well as mothers' education (model 2), and finally country was added (model 3). This process yielded three regression models (see Table 4), in which the complete model explained 29.4% of children's SED variance at T2 and was statistically significant (F = 10.318, $p \leq .001$).

The first model showed that SED at T1 was a significant predictor of SED at T2 ($\beta = .253$, t = 2.76, $p = .007$), explaining 6.4% of the variance and remaining a significant predictor after all variables had been added to the model. This result indicated that the higher SED at T1 was predictive of a higher SED at T2. As previously stated, this outcome was expected and contributes to supporting the stability of the construction. The second model showed that children's age at T2 was a significant predictor (β = .419, t = 4.89, $p \leq .001$), contributing 15.9% of the explained variance. This is consistent with the fact that children's age fell within a range of 6 months (28 to 33 months), which is a wide range at this developmental stage. Next, maternal education was a significant predictor explaining 7.6% of the variance and ($\beta = .298$, t = 3.58, $p \leq .001$) remaining significant in the final model. Finally, once adjustments were made for the other variables, country was not significant (model 3, see Table 4).

Table 4.
Hierarchical regression analysis for children's SED at T2

	Model 1			Model 2			Model 3		
	B	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	β
Intercept	84.08	16.72		-71.08	36.23		-61.57	37.06	
SED T1	0.62	0.22	.253**	0.52	0.20	.214**	0.56	0.20	.228**
Child's age T2				4.73	1.12	.344**	4.24	1.20	.308**
Mother's education				4.08	1.13	.299**	3.40	1.27	.248**
Country							4.58	3.90	.115
F	7.59**			16.84**		13.02**			
R^2 adjusted	.064			.317		.325			

**< 0.01

Country and Maternal Education: How They Mediate SED at Time 2

Even though initial regression analysis models showed that children's country significantly explained children's SED variance, when maternal education was included, this significance disappeared. Thus, a Sobel test was performed to analyze a possible mediating role of maternal education, controlling for SED T1 and child's age at T2.

As Table 2 shows, the country had a significant effect on SED at T2, but only through maternal education ($\beta = .157$, SE = 2.021, $p \leq .001$). Therefore, analyses revealed that maternal education (which is also a contextual variable, like country) was the variable that explained the variance of SED in both samples.

Regarding the adjustment indicators, the chi-square goodness-of-fit statistic was not significant (X^2 = 3.67, gl = 2, p = .16), indicating that the data fit the theoretical model and that there was good adaptation to the proposed model (Byrne, 2006). In this model, the comparative fit index (CFI)

was 1.00, and the TLI was 1.01, which indicates a good adjustment with values higher than 0.95. Additionally, the root mean square error of approximation (RMSEA) was 0.000 [90% CI = 0-0.243] and SRMR (0.022), showing values lower than .88. All these indicators together showed that the confirmatory model fits well with the observed correlation matrix (Byrne, 2006).

Discussion

The literature suggests that depending on the context in which a child develops, particular characteristics of socioemotional development (SED) (e.g., freedom of expression, cooperation, responsibility, aggression, and shyness) may be fostered (Chen & Rubin, 2011). Therefore, differences in children's SED between Chilean and U.S. samples, as well as changes between 12 and 30 months, were expected.

Firstly, and in contrast to what was expected, no significant differences between countries at T1 and T2 were identified. One possible explanation is that data were collected in specific cities of both countries, and only children residing in those cities and attending daycare centers were included. This allows us to hypothesize that these samples may not have significant differences between each other, which in turn may have influenced the results. Another possible explanation is that the children in this study were still too young for differences to emerge in response to increased exposure to socialization and culture (Else-Quest et al., 2006).

Regarding the observed changes in SED between the two time points, U.S. children showed a significantly greater increase compared with their Chilean counterparts. In line with previous studies, this result allows to hypothesized that a context of development such as the U.S., where parents promote individuality, autonomy, separation, and the encouragement of emotional expression through a less strict form of discipline without apprehensions related to conformity of the group (Keller & Greenfield, 2000; Schwab, 2013), may have a greater impact in promoting children's SED.

Conversely, collectivistic values identified in a country such as Chile (e.g., encouragement of obedience, group conformity, and critiques of emotional expressions) may not diminish children's SED (Chao, 1995; Chen & Rubin, 2011; Keller et al., 2004; Markus & Kitayama, 1991; Matsumoto, 1991; Schwartz, 2006).

Moreover, the results showed that country had a predictive effect on children's SED at 30 months. However, this result was indirect, since it operated through mothers' education. Therefore, analyses revealed that maternal education mediated the influence of the country on children's SED, where Chilean mothers had more heterogeneity regarding educational levels in comparison with their U.S. counterparts. Previous studies have shown that maternal education predicts the quality of mother-child interactions (Klebanov et al., 1994; Olhaberry & Santelices, 2013) as well as how higher levels of maternal education are positively associated with children's SED (Bornstein & Bradley, 2003). Furthermore, higher educational levels of education have been linked to individualistic cultural elements, whereas the opposite may be related to more collectivistic contextual values. Therefore, future research should examine more specific effects of caregivers' educational levels, as well as the heterogeneity within each sample with the relationship between country and children's SED.

Additionally, for mothers with lower educational levels, such as Chilean, upbringing may become a greater challenge which may to lead to higher levels of stress. This, in turn, may negatively impact parenting skillsincreasing the social pressure of raising their children according to what is valued within their context. Thus, mothers in this situation may tend to disregard characteristics inherent to age and be less receptive to children's individual differences, all of which would diminish SED (Koeske & Koeske, 1990; Mermelshtine & Barnes, 2016).

Recognizing that effective parenting is a process through which parents meet their children's needs according to cultural norms that evolve from

generation to generation (Smetana, J. 2017), and that there are studies suggesting that some parenting behaviors appear to be universally adaptive across different cultures, such as physical care, which is crucial for infant survival, behaviors like responding to babies' vocalizations and fostering secure attachment relationships are likely consistent across cultures (Rohner & Lansford, 2017). This study underscores the importance of considering the role of the family's economic, human, and social capital in explaining variability in parent-child interactions across cultural groups, aligning with other studies that emphasize the importance of considering both the characteristics of childcare environments and cultural parenting practices when analyzing the socioemotional development of children in different contexts (Kuchirko & Tamis-LeMonda, 2019), as well as the importance of implementing preventive interventions across various contexts to promote child socioemotional development, particularly when parental risk factors are present.

Limitations and Future Research

This study had some limitations that must be addressed. Firstly, samples were small and not equivalent to countries and therefore results should be interpreted with caution. Another limitation is that SED was assessed through mothers' reports of their children's socioemotional development, which may introduce bias due to maternal perceptions. In this regard, it would be interesting for future research to assess SED with other instruments to complement maternal reports.

Future studies should also employ larger and more representative samples to validate these results as well as incorporate observational instruments for the evaluation of SED. Likewise, it would be interesting if future studies could assess differences in parenting skills, strategies, and beliefs in caregivers with different educational levels as well as in various cultural contexts in order to develop a deeper understanding of how these variables impact children's SED. Particularly, it would be interesting if future studies could specifically explore what mothers with higher education do differently in comparison with mothers with lower levels of education. This could be approached through quantitative and qualitative methodologies.

Despite these limitations, this study contributes to a broader understanding of the variables involved in children's SED in this case, the influence of contextual variables, such as country and maternal education, on early childhood development.

References

Bakermans-Kranenburg, M. J., Van Ijzendoorn, M. H., & Juffer, F. (2003). Less is more: Meta-analyses of sensitivity and attachment interventions in early childhood. *Psychological Bulletin, 129*(2), 195–215. https://doi.org/10.1037/0033-2909.129.2.195

Barata, C. (2011). *Executive function skills in Chilean pre-school children* [Doctoral Thesis]. Retrieved from ProQuest Information and Learning.

Bayley, N. (2006). *Bayley Scales of Infant and Toddler Development-Third Edition*. Harcourt Assessment.

Bergeron, N., & Schneider, B. H. (2005). Explaining cross-national differences in peer-directed aggression: A quantitative synthesis. *Aggressive Behavior*, *31*(2), 116–137. https://doi.org/10.1002/ab.20049

Bornstein, M. H., & Bradley, R. H. (2003). *Socioeconomic status, parenting, and child development.* Routledge.

Bowlby J. Attachment and Loss, Vol. 1. *Attachment*. Basic Books. 1969.

Bradley, M. M., Codispoti, M., Sabatinelli, D., & Lang, P. J. (2001). Emotion and motivation II: Sex differences in picture processing. *Emotion, 1*(3), 300–319. https://doi.org/10.1037/1528-3542.1.3.300

Bronfenbrenner, U. (1979). Contexts of child rearing problems and prospects. *American Psychologist*, *34*(10), 844–850. https://doi.org/10.1037/0003-066X.34.10.844

Brophy-Herb, H. E., Bocknek, E. L., Valloton, C. D., Stansbury, K. E., Senehi, N., Dalimonte-Merckling, D., & Lee, Y. E. (2015). Toddles with early behavioral problems at higher family demographic risk benefit the most from maternal emotion talk. *Journal of Developmental and Behavioral Pediatrics:* JDBP, *36*(7), 512–520. https://doi.org/10.1097/dbp.0000000000000196

Brownell, C., & Kopp, C. (2007). *Socioemotional development in the toddler years. Transitions and transformations*. Guilford Press.

Butler, E. A., Lee, T. L., Gross, J. J. (2007). Emotion regulation and culture: Are the social consequences of emotion suppression culture-specific? *Emotion,7*(1),30–48. https://doi.org/10.1037/1528-3542.7.1.30

Byrne, B. M. (2006). *Structural Equation Modeling with* EQS: *Basic concepts, applications, and programming.* Mahwah.

Calzada, E. J. (2010). Incorporating the cultural value of respect into a framework of Latino parenting. *Cultural Diversity and Ethnic Minority Psychology, 16*(1), 77–86. https://doi.org/10.1037/a0016071

Campos, J. J., Mumme, D., Kermoian, R., & Campos, R. G. (1994). A functionalist perspective on the nature of emotion. *Japanese Journal of Research on Emotions, 2*(1), 1–20. https://doi.org/10.4092/jsre.2.1

Camras, L. A., Bakeman, R., Chen, Y., Norris, K., & Cain, T. R. (2006). Culture, ethnicity, and children´s facial expressions: A study of European American, Mainland Chinese, Chinese American, and adopted Chinese girls. *Emotion*, *6*(1), 103–114. https://doi.org/10.1037/1528-3542.6.1.103

Camras, L. A., Oster, H., Campos, J., Campos, R., Ujiie, T., Miyake, K., Wang, L., & Meng, Z. (1998). Production of emotional facial expressions in European American, Japanese, and Chinese infants. *Developmental Psychology*, *34*(4), 616–628. https: doi.org/10.1037/0012-1649.34.4.616

Chan, S. M., Bowes, J., & Wyver, S. (2009). Parenting style as a context for emotion socialization. *Early Education and Development, 20*(4), 631–656. https://doi.org/10.1080/10409280802541973

Chao, R. K. (1995). Chinese and European American cultural models of the self-reflected in mothers' childrearing beliefs. *Journal of the Society for Psychological Anthropology, 23*(3), 328–354. https://doi.org/10.1525/eth.1995.23.3.02a00030

Chen, X. (2011). Culture, peer interaction and social-emotional development. *Child Development Perspectives, 6*(1), 27–34. https://doi.org/10.1111/j.1750-8606.2011.00187.x

Chen, X., & Rubin, K. (2011). *Socioemotional development in cultural context*. Guilford Press.

Cohen, J., Onunaku, N., Clothier, S., and Poppe, J. (2005). *Helping young children succeed: Strategies to promote early childhood social and emotional development*. Washington, DC: National Conference of State Legislatures.

Denham, S., Mitchel-Copeland, J., Strandberg, K., Auerbach, S., & Blair, K. (1997). Parental contribution to preschoolers' emotional competence: Direct and indirect effects. *Motivation and Emotion 21*(1), 65–86. https://doi.org/10.1023/A:1024426431247

Dodge, K. A., Pettit, G. S., & Bates, J. E. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Development*, *65*(2), 649–665. https://doi.org/10.2307/1131407

Else-Quest, N., Hyde, J., Goldsmith, H., & Van Hulle, C. (2006). Gender differences in temperament: A meta-analysis. *Psychological Bulletin*, *132*(1), 33–72. https://doi.org/10.1037/0033-2909.132.1.33

Farkas, C. (2007). Comunicación gestual en la infancia temprana: Una revisión de su desarrollo, relación con el lenguaje e implicancias de su intervención [Gestural communication in early infancy: A review of its development, relation with language and intervention implications], *Psykhe, 16*(2), 107–115.doi:10.4067/S0718-22282007000200009

Farkas, C., Santelices, M. P., & Himmel, E. (2013). Análisis desde una perspectiva evolutiva y cultural del uso de la comunicación gestual en infantes y preescolares, en la expresión y comprensión de los estados internos y su impacto en el desarrollo socioemocional de los niños. [Analysis from a cultural evolutionary perspective of the use of gestural communication in infants and preschoolers in the expression and understanding of internal states and its impact on socioemotional development of children] (FONDECYT Project No. 1110087. School of Psychology, Pontificia Universidad Católica de Chile, Santiago, Chile).

Farver, A. M., Kim, Y. K., & Lee, Y. (1995). Cultural differences in Korean- and Anglo-American preschoolers' social interaction and play behaviors. *Child Development*, *66*(4), 1088–1099. https://doi.org/10.1111/j.1467-8624.1995.tb00924.x

Fiske, A. P., Kitayama, S., Markus, H. R., & Nisbett, R. E. (1998). The cultural matrix of social psychology.

In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The Handbook of social psychology* (pp. 915-981). McGraw-Hill.

Fox, R., Platz, D., & Bentley, K. (1995). Maternal factors related to parenting practices, developmental expectations, and perceptions of child behavior problems. *The Journal of Genetic Psychology*, *156*(4), 431–441. https://doi.org/10.1080/00221325.1995.9914835

Greenfield, P. M., Keller, H., Fuligni, A., & Maynard, A. (2003). Cultural pathways through universal development. *Annual Review of Psychology, 54*(1), 461–490. https://doi.org/10.1146/annurev.psych.54.101601.145221

Greenspan, S. I., DeGangi, G., & Wieder, S. (2001). *The Functional Emotional Assessment Scale (*FEAS*): For infancy and early childhood.* Interdisciplinary Council on Development and Learning Disorders.

Greenspan, S. I., & Shanker, S. (2004). *The first idea: How symbols, language, and intelligence evolved from our primate ancestors to modern humans*. Perseus Books.

Greenspan, S. I., & Wieder, S. (2006). *Infant and early childhood mental health. A comprehensive development approach to assessment and intervention.* American Psychiatric Publishing.

Hoff, E., Laursen, B., & Tardif, T. (2002). Socioeconomic status and parenting. In M. H. Bornstein (Ed.), *Handbook of parenting Volume 2: Biology and ecology of parenting* (pp. 231–252). Mahwah.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Sage.

Hofstede, G. (1991). *Cultures and organizations. Software of the mind*. McGraw-Hill.

Hofstede, G. (2001). *Culture's consequences: Comparing values behaviors, institutions and organizations across nations*. Sage.

Keller, H. (2003). Socialization for competence cultural models of infancy. *Human Development, 46*(5), 288–311. https://doi.org/10.1159/000071937

Keller, H. (2007). *Cultures of infancy*. Lawrence Erlbaum Associates Publishers.

Keller, H. (2012). *Cultures of Infancy.* Psychology Press.

Keller, H., & Greenfield, P. (2000). History and future of development in cross–cultural psychology. *Journal of Cross-Cultural Psychology*, *31*(1), 52–62. https://doi.org/10.1177/0022022100031001005

Keller, H., & Kärtner, J. (2013). Development. The cultural solution of universal developmental tasks. In J. M. Gelfand, C. Y. Chiu, & Y. Y. Hong (Eds.), *Advances in culture and psychology* (pp. 63–116). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199930449.003.0002

Keller, H., Lohaus, A., Kuensemueller, P., Abels, M., Yovsi, R., Voelker. S., Jensen, H., Papaligoura, Z., Rosabal-Coto, M., Kulks, D., & Mohite, P. (2009). The Bio-culture of parenting: evidence from five cultural communities. *Parenting: Science and Practice*, *4*(1), 25–50. https://doi.org/10.1207/s15327922par0401_2

Keller, H., Yovsi, R., Borke, J., Kärtner, J., Jensen, H., & Papaligoura, Z. (2004). Developmental consequences of early parenting experiences: self- recognition and self-regulation in three cultural communities. *Child Development, 75*(6), 1745–1760. https://doi.org/10.1111/j.1467-8624.2004.00814.x

Klebanov, P. K., Brooks-Gunn, J., & Duncan, G. (1994). Does neighborhood and family poverty affect mothers' parenting, mental health, and social support? *Journal of Marriage and Family*, *56*(2), 441–455. https://doi.org/10.2307/353111

Koeske, G., & Koeske, R. (1990). The buffering effect of social support on parental stress. *American Journal of Orthopsychiatry, 60*(3), 440–451. https://doi.org/10.1037/h0079164

Kolstad, A., & Horpestad, S. (2009) Self-construal in Chile and Norway: implications for cultural differences in individualism and collectivism. *Journal of Cross-Cultural Psychology*, *40*(2), 275–81. https://doi.org/10.1177/0022022108328917

Kulkarni, S., Hudson, T., Ramamoorthy, N., Marchev, A., Georgieva-Kondakova, P., & Gorskov, V. (2010). Dimension of individualism-collectivism: a comparative study of five cultures. *Current Issues of Business and Law, 5*, 93–109. https://doi.org/10.5200/1822-9530.2010.03

Kuchirko, Y. A., & Tamis-LeMonda, C. S. (2019). The cultural context of infant development: Variability, specificity, and universality. *Advances in child development and behavior*, *57*, 27–63. https://doi.org/10.1016/bs.acdb.2019.04.004

Knudsen EI. (2004). Sensitive periods in the development of the brain and behavior. *J. Cogn Neurosci*, *16*(8):1412–1425. doi: 10.1162/0898929042304796.

Markus, H. R., & Kitayama, S. (1991). Culture and self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*(2), 224–253. https://doi.org/10.1037/0033-295X.98.2.224

Matsumoto, D. (1991). Cultural influences on facial expressions of emotion. *Southern Communication Journal, 56*(2), 128–137. https://doi.org/10.1080/10417949109372824

Matsumoto, D., & Juang, L. P. (2008). *Culture and Psychology*. Wadsworth/Thomson.

Matsumoto D, Yoo S. H., Nakagawa, S. (2008). Culture, emotion regulation, and adjustment. *J Pers Soc Psychol, 94*(6), 925–37. https://doi: 10.1037/0022-3514.94.6.925

Mermelshtine, R., & Barnes, J. (2016). Maternal responsive- didactic caregiving in play interactions with 10- month-olds and cognitive development at 18 months. *Infant and Child Development, 25*(3), 296–316. https://doi.org/10.1002/icd.1961

Metwally, A. M., Salah El- Din, E. M., Shehata, M. A., Shaalan, A., El Etreby, L. A., Kandeel, W. A., Shaaban, S. Y., & Rabah, T. M. (2016). Early life predictors of socio-emotional development in a sample of Egyptian infants. PLoS ONE, *11*(7). https://doi.org/10.1371/journal.pone.0158086

Muzard, A., Kwon, A., Espinosa, N., Vallotton, C., & Farkas, C. (2017). Infants' emotional expression: Differences in the expression of pleasure and discomfort between infants from Chile and the United States. *Infant Child Development, 26*(6), 1-12. https://doi.org/10.1002/icd.2003

Neitzel, C., & Stright, A. D. (2004). Parenting behaviors during child problem solving: The roles of child temperament, mother education and personality, and the problem —solving context. *International Journal of Behavioral Development*, *28*(2), 166–179. https://doi.org/10.1080/01650250344000370

OCDE (2016). PISA *2015, resultados clave* [PISA 2015, key results]. Retrieved from https://www.oecd.org/pisa/pisa-2015-results-in-focus-esp.pdf

Olhaberry, M., & Santelices, M. P. (2013). Presencia del padre y calidad de la interacción madre-hijo: Un estudio comparativo en familias chilenas nucleares y monoparentales [Father's Presence and the Quality of Mother-Child Interaction: A Comparative Study on Chilean Nuclear and Single-Mother Families]. *Universitas Psychologica, 12*(3), 833–843. https://doi.org/10.11144/Javeriana.upsy12-3.ppci

Page, M., Wilhelm, M., Gamble, W. C., & Card, N. A. (2010). A comparison of maternal sensitivity and verbal stimulation as unique predictors of infant social-emotional and cognitive development. *Infant Behavior and Development*, *33*(1), 101–110. https://doi.org/10.1016/j.infbeh.2009.12.001

Perner, J. (1994). *Comprender la mente representacional*. Paidós.

Pettenati, P., Sekine, K., Congestrì, E., & Volterra, V. (2012). A comparative study on representational gestures in Italian and Japanese children. *Journal of Nonverbal Behavior*, *36*(2), 149–164. https://doi.org/10.1007/s10919-011-0127-0

Raver, C., & Zigler, E. (1997). Social competence: An untapped dimension of Head Start's success. *Early Childhood Research Quarterly, 12*(4), 363–385. https://doi.org/10.1016/S0885-2006(97)90017-X

Rohner, R. P., Lansford J. E. (2017). Docment details- Depp Structure of human affectional systems: Introduction to interpersonal acceptance-rejection Theory. *Journal of Family Theory and Review 9*(4) 426–440. https://doi.org/10.1111/jftr.12219

Schore, A. N. (2001). Effects of a secure attachment relationship on right brain development. Affect regulation, and infant mental health. *Infant Mental Health Journal, 22*(1–2), 7–66. https://doi.org/10.1002/1097-0355(200101/04)22:1<7::aid-imhj2>3.0.co;2-N

Schore A. N. (2005). Back to basics: attachment, affect regulation, and the developing right brain: linking developmental neuroscience to pediatrics. *Pediatr Rev*, *26*(6), 204–217. doi: 10.1542/pir.26-6-204.

Schwab, K. W. (2013). Individualism-collectivism and power distance cultural dimensions: How each influences parental disciplinary methods. *Journal of International Education and Leadership, 3*(3), 1–8.

Schwartz, S. H. (2006). A theory of cultural value orientations: Explication and applications. *Comparative Sociology, 5*(2–3), 137–182. https://doi.org/10.1163/156913306778667357

Singelis, T. M., Triandis, H. C., Bhawuk, P. S., & Gelfand, M. J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-Cultural Research, 29,* 240–275. https://doi.org/10.1177/106939719502900302

Smetana J. G. (2017). Current research on parenting styles, dimensions, and beliefs. *Current opinion in psychology*, *15*, 19–25. https://doi.org/10.1016/j.copsyc.2017.02.012

Spinrad, T. L., Eisenberg, N., Gaertner, B., Popp, T., Smith, C. L., Kupfer, A., Grieving, K., Liew, J., & Hofer, C. (2007). Relations of maternal socialization and toddlers' effortful control to children's adjustment and social competence. *Developmental Psychology, 43*(5), 1170–1186. https://doi.org/10.1037/0012-1649.43.5.1170

Sroufe, A. (2000). *Desarrollo emocional*. Oxford University Press.

Stern, D. *The First Relationship Infant and Mother, With a New Introduction*. Harvard University Press. 2009.

Stevenson-Hinde, J. (2011). Culture and socioemotional development, with a focus on fearfulness and attachment. In X. Chen & K. Rubin (Eds.), *Socioemotional development in cultural context* (pp. 11–28). Guilford Press.

Super, C. M., & Harkness, S. (1986). The developmental niche: A conceptualization at the interface of child and culture. *International Journal of Behavioral Development*, *9*(4), 545–569. https://doi.org/10.1177/016502548600900409

Thompson, R. (1991). Emotional regulation and emotional development. *Educational Psychology Review, 3*(4), 269–307. https://doi.org/10.1007/bf01319934

Tomlinson, M., Bornstein, M. H., Marlow, M., Swartz, L. (2014). Imbalances in the knowledge about infantmental health in rich and poor countries: too littleprogress in bridging the gap. *Infant Ment. Health J.,35*, 624–629. https://doi.org/10.1002/imhj.21462

Tremblay, R. E., Nagin, D. S., Séguin, J. R., Zoccolillo, M., Zelazo, P. D., Boivin, M., Pérusse, D., & Japel, C. (2004). Physical aggression during early childhood : trajectories and predictors. *Pediatrics, 114*(1), 43–50. https://doi.org/10.1542/peds.114.1.e43

Vallotton, C. D. (2008). Signs of emotion: What can preverbal children "say" about internal states? *Infant Mental Health Journal, 29*(3), 234–258. https://doi.org/10.1002/imhj.20175

Vallotton, C. D. (2012). Infant signs as intervention? Promoting symbolic gestures for preverbal children in low-income families supports responsive parent-child relationships. *Early Childhood Research Quarterly, 27*(3), 401–415. https://doi.org/10.1016/j.ecresq.2012.01.003

Vallotton, C. D., & Ayoub, C. (2011). Use your words: The role of language in the development of toddlers' self-regulation. *Early Childhood Research Quarterly, 26*(2), 169–181. https://doi.org/10.1016/j.ecresq.2010.09.002

Wang, Q., & Leichtman, M. (2000). Same beginnings, different stories: A comparison of American and Chinese children's narratives. *Child Development, 71*(5), 1329–1346. https://doi.org/10.1111/1467-8624.00231

Wienberg, M. K., Tronick, E., Cohn, J. F., & Olson, K. L. (1999). Gender differences in emotional expressivity and self-regulation during early infancy. *Developmental Psychology, 35*(1), 175–188. https://doi.org/10.1037//0012-1649.35.1.175

doi: https://doi.org/10.15446/rcp.v34n2.111867

Explanatory Model of Intrinsic Motivation in University Students

Nancy Lizeth Ramírez-Roncancio
Universidad Pedagógica y Tecnológica de Colombia

Martha Cecilia Jiménez-Martínez
Universidad Pedagógica y Tecnológica de Colombia

Yeimy Tatiana Albarracín-Chaparro
Universidad Pedagógica y Tecnológica de Colombia

Diana Carolina Latorre-Velásquez
Universidad Pedagógica y Tecnológica de Colombia

Daniel González Lomelí
University of Sonora: Hermosillo

How to cite this article: Ramírez-Roncancio, N. L., Jiménez-Martínez, M. C., Albarracín-Chaparro, Y. T., Latorre Velásquez, D. C. & González Lomelí, D. (2025). Explanatory Model of Intrinsic Motivation in University Students. *Revista Colombiana de Psicología*, *34*(2), 115-126. https://doi.org/10.15446/rcp.v34n2.111867

Correspondence: Nancy Lizeth Ramírez-Roncancio (https://orcid.org/0000-0001-9937-4640).
Email: nancylizeth.ramirez@uptc.edu.co

SCIENTIFIC RESEARCH ARTICLE

RECEIVED: OCTOBER 27TH, 2023 - ACCEPTED: MARCH 22TH, 2024

Explanatory Model of Intrinsic Motivation in University Students

Abstract

Despite numerous studies on intrinsic motivation and its relationship with individual and contextual variables, few investigations explore this relationship using a multivariate approach. This research employs an explanatory design with cross-sectional measures to empirically assess a model examining the direct and indirect associations between intrinsic motivation, achievement orientation, procrastination, school perception, and self-efficacy among 389 non-randomly selected Colombian university students who responded to the instruments via Google Forms. The resulting model demonstrates an adequate practical fitness. In this model, achievement orientation, school perception, and self-efficacy positively and directly influence intrinsic motivation, while procrastination negatively and directly influences self-efficacy. Furthermore, self-efficacy indirectly affects intrinsic motivation through the latent variable of procrastination. These findings support the design of interventions aimed at fostering intrinsic motivation and helping students develop time management and task-planning skills to reduce procrastination and enhance academic performance.

Keywords: intrinsic motivation, university students, procrastination, self-efficacy, achievement orientation, school perception.

Modelo Explicativo de la Motivación Intrínseca en Estudiantes Universitarios

Resumen

A pesar de los numerosos estudios sobre la motivación intrínseca y su relación con variables individuales y contextuales, pocas investigaciones exploran esta relación utilizando un enfoque multivariante. Esta investigación emplea un diseño explicativo con medidas transversales para evaluar empíricamente un modelo que examina las asociaciones directas e indirectas entre motivación intrínseca, orientación al logro, procrastinación, percepción escolar y autoeficacia en 389 estudiantes universitarios colombianos seleccionados de forma no aleatoria que respondieron a los instrumentos a través de *Google Forms*. El modelo resultante demuestra una adecuada adecuación práctica. En este modelo, la orientación al logro, la percepción escolar y la autoeficacia influyen positiva y directamente en la motivación intrínseca, mientras que la procrastinación influye negativa y directamente en la autoeficacia. Además, la autoeficacia afecta indirectamente a la motivación intrínseca a través de la variable latente de la procrastinación. Estos resultados apoyan el diseño de intervenciones dirigidas a fomentar la motivación intrínseca y ayudar a los estudiantes a desarrollar habilidades de gestión del tiempo y planificación de tareas para reducir la procrastinación y mejorar el rendimiento académico.

Palabras clave: motivación intrínseca, estudiantes universitarios, procrastinación, autoeficacia, orientación al logro, percepción escolar.

Introduction

The natural scenario caused by the COVID-19 pandemic spurred interest in researching various sociocultural, economic, physical, and psychological phenomena, which in a post-pandemic panorama brings short-term and long-term repercussions. Particularly in the educational sphere, the necessity to seek, generate, and integrate novel strategies to sustain and bolster student motivation and interest in their learning processes led to the excessive use of ICT tools and activities oriented towards achieving learning objectives.

Despite the literature indicating that new learning scenarios yield cognitive challenges and promote intrinsic motivation, researchers observed that during the pandemic and the readjustment to the post-pandemic setting, their usage produced a counterproductive effect (Cahyani, 2020; Condori et al., 2021). Potential factors contributing to these effects include disruptions in student and teacher learning expectations, excessive time allocation to academic tasks, and little demarcation from other areas of people's lives, alongside challenges in managing study habits and routines, and inadequate use of planning and self-management strategies (Lamanauskas et al., 2021; Yamin & Muzaffar, 2021).

Intrinsic motivation influences what, when, and how one learns, thus becoming a strategy conducive to the meaningful construction of knowledge, given that it entails a more enduring relationship between aspirations and the actions undertaken to achieve them (Calet & Dumitrache, 2016). Ryan and Deci (2000) define intrinsic motivation as involving interest (e.g., mastery, competence, and self-efficacy), enjoyment of an activity for its own sake, and exploration, all essential for cognitive and social development.

Prior studies compare the impact of individual factors on intrinsic motivation in ICT-mediated and traditional face-to-face learning environments. Findings indicate that intrinsic and self-motivation are higher in virtual learning contexts as long as they do not exceed the limits for academic task fulfillment. Intrinsic motivation, as a protective factor, is attributed to generating positive outcomes associated with enthusiasm for learning. It enhances academic performance, strengthens commitment, reduces procrastination, and increases engagement and persistence in academic tasks (Cahyani, 2020).

Although numerous studies explore the relationship between intrinsic motivation and individual variables such as procrastination (Pelikan et al., 2021a), achievement orientation (Caso-Fuertes &; García-Sánchez, 2006; Ramírez Gallego, 2022), self-determination (Malinauskas & Pozeriene, 2020), self-regulation (Ma et al., 2022; Xu et al., 2021), self-motivation (Afzal & Crawford, 2022), self-efficacy (Yapo et al., 2021), and academic performance (Echeverri, 2017; Navarro, 2016; Quispe, 2023; Stover, 2014). Only a few studies explore multivariate relationships to elucidate the role of this motivation in learning, considering both the individual and external factors affecting students.

This study seeks to evaluate a model assessing the direct and indirect relationships between intrinsic motivation, achievement orientation, self-efficacy, procrastination, and school perception among Colombian university students. Specifically, we hypothesize that achievement orientation (H1a), self-efficacy (H1b), procrastination (H1c), and school perception (H1d) directly influence intrinsic motivation. Additionally, we propose that procrastination negatively affects self-efficacy (H2a) and achievement orientation (H2b).

Intrinsic Motivation and Learning

Intrinsic motivation refers to an internal drive that propels a person to be competent and self-determined, leading to a sense of control over a situation and achieving success (Llanga et al., 2019). This inner force, rooted in the psychological needs of self-determination theory, relates to feelings of competence that regulate behavior during action. It arises through the interplay of components such as autonomy, competence, and relatedness (Ryan & Deci, 2000).

In the educational field, internalization processes exist to explain why someone performs an action or is willing to engage in it, even when external factors (e.g., grades, honor roll recognition) initially influence their actions. Biological, cognitive, and social interpretations explain this internalization process (Chóliz, 2004; Ryan & Deci, 2000). In learning, the student's participation activates biological conditions according to their homeostasis needs. This participation leads to evaluating the goal and determining the action to take, which leads to planning the process and objectives to achieve the goal. Cognitive aspects (such as prior knowledge, resources, or problem-solving strategies), contextual factors (including deadlines and task demands), and social factors (such as teacher-student relationships and peer interactions) can modify this biological condition. Emotional conditions also play a role, guiding the search for or avoiding emotions such as stress. The biological, contextual, social, and emotional conditions that form the student work together to guide behavioral tendencies, becoming a determinant in the eventual engagement in activities without the need for external rewards. Through this process, the transition from external to internal regulation occurs, as internal factors responsible for activating, directing, and maintaining a specific behavior sustain it over time (Caso & García, 2006; Ryan & Deci, 2000).

Intrinsic Motivation Studies During and Post Pandemic

Research on intrinsic motivation before, during, and after the COVID-19 pandemic has primarily been associated with variables such as procrastination (e.g., González et al., 2006; Ma et al., 2022; Pelikan et al., 2021a; Plikan et al., 2021b; Ramírez Gallego, 2022), self-determination (e.g., Afzal & Crawford, 2022 Gustiani, 2020; Malinauskas & Pozeriene, 2020; Pelikan et al., 2021a; Pelikan et al., 2021b), and self-regulation (e.g., Esparragoza, 2021; Martínez et al., 2022; Pelikan et al., 2021a; Xu et al., 2021). Some of these studies analyzed how university students maintained their motivation and positive attitudes, while others examined the effects of online, remote, and in-person teaching modalities on perceptions of performance and motivation for learning (e.g., Lazcano et al., 2022). Additionally, some studies compared the effects of teaching methods such as flipped learning and the jigsaw technique (for multiple conflict resolution) on motivation (e.g., Haftador et al., 2021). Furthermore, some investigations examined the association between intrinsic motivation and psychological well-being (e.g., Andrén & Pettersson, 2020; Yamin & Muzaffar, 2021).

Method

This explanatory study employed a cross-sectional design to evaluate a model examining the direct and indirect relationships between intrinsic motivation, school perception, achievement orientation, procrastination, and self-efficacy among Colombian university students.

Participants

The non-probabilistic sample included 389 Colombian university students (64.3% women, 35.7% men) aged 18 to 55. Participants were enrolled in technical programs (8%), undergraduate degrees (79.2%), and postgraduate degrees (12.9%) across various fields of knowledge. Participants voluntarily consented to participate, completing the online instruments, and providing informed consent following the stipulations outlined in Resolution 008430 of 1993 from the Colombian Ministry of Health concerning research involving human subjects, as well as the principles established in and Law 1090, which governs psychology practice in the Colombian territory. The inclusion criteria required participants to be actively engaged in academic activities under remote learning modalities (Hodges et al., 2020). Those who did not fully complete the instruments were excluded.

Instruments

This research used an online survey assessed intrinsic motivation, school perception, achievement orientation, procrastination, and self-efficacy. The survey, designed using Google Forms, included an informed consent form and a sociodemographic profile comprising 11 closed and open-ended items, aimed to collect data on age, sex, education level, and time dedicated to physical activity during the previous week. The instrument allowed a comprehensive understanding of the participants' history and physical activity habits. Additionally, the study employed the scales for intrinsic motivation, achievement orientation, self-efficacy, procrastination, and school perception proposed by Aguilar et al. (2002).

The *intrinsic motivation scale* comprises nine items assessing the students' satisfaction regarding their curriculum and field of knowledge. Cronbach's alpha coefficient was .74, with a mean of 49.11 and a range of 26-63. The *achievement orientation scale* comprised nine items measuring the tendency to set and strive to achieve high goals. Cronbach's alpha was .76, with a mean of 39.16 and a range of 22-53. The *self-efficacy scale* included six items concerning the students' competency assessment to complete their studies and pursue their profession successfully. Cronbach's alpha was .78, with a mean of 23.35 and a range of 10-30. The *procrastination scale* consisted of nine items assessing the tendency to postpone completing tasks and academic duties. Cronbach's alpha was .72, with a mean of 26.50 and a range of 10-43. The *school perception scale* evaluated students' perceptions of their teachers, peers, and school. Cronbach's alpha was .74, with a mean of 25.08 and a range of 22-13

Procedure

The online questionnaire was distributed via email, detailing the study's objectives, completion instructions, researcher information, and a Google Forms link. Participants provided informed consent before accessing the survey.

Data Analysis

Structural equation modeling was used to evaluate the proposed theoretical model, identifying structural weights for latent (intrinsic motivation) and observed (school perception, achievement orientation, procrastination, and self-efficacy) variables. Goodness-of-fit was assessed using statistical measures, including IBBAN, IBBANN, IAC, and RMSEA. Descriptive statistics characterized the sample. Analyses were conducted using SPSS v.21 and EQS v.6.

Results

This section first presents the results of the descriptive analysis, which provides an overview of the score distribution for each variable. Subsequently, the resulting model is discussed, exploring potential relationships among these variables. Table 1 displays the mean values, standard deviations, skewness, kurtosis, range, minimum, and maximum values obtained for each scale. These results indicate that, on average, students exhibit a moderate level of self-efficacy (M = 15.14), though responses show considerable variability (SD = 3.24).

Table 1.
Description of the variables measured

Variable	N	Range	Minimum value	Maximum value	Mean	SD	Asymmetry	EE	Kurtosis	EE
Self-efficacy	389	19.00	5.00	24.00	15.14	3.24	-0.13	0.1	0.05	.24
Procrastination	389	40.00	8.00	48.00	27.07	8.42	.03	.12	-.23	.24
Achievement orientation	389	20.00	4.00	24.00	19.18	3.16	-.85	.12	1.84	.24

Intrinsic motivation	389	25.00	5.00	30.00	24.36	3.56	-.81	.12	1.87	.24
School perception	389	20.00	4.00	24.00	18.96	4.10	-1.0	.12	.89	.24

A confirmatory factor analysis (CFA) conducted using structural equation modeling (SEM) reveals that the first-order latent variable of school perception has become an independent latent variable that is not influenced by any other variable (exogenous). Moreover, intrinsic motivation is a dependent variable that receives a direct and positive effect from achievement orientation, self-efficacy, and school perception. Additionally, procrastination has an indirect and negative effect on intrinsic motivation through self-efficacy.

The structural model only exhibits practical goodness-of-fit (χ^2 = 521 (222 df), p = .00; IBBANN = .92, CFI = .93, and RMSEA = .05 [CI .05, .06]). The relationship model explains 57% of the variability in intrinsic motivation, suggesting that this model has the same explanatory power as the saturated model, which interrelates all variables. Model reliability indices were adequate (α = .64 and the reliability coefficient RHO = .84).

The resulting structural model indicates that intrinsic motivation among the sampled students receives a direct and positive effect from achievement orientation (structural weight of .67), school perception (structural weight of .18), and self-efficacy (structural weight of .14). In turn, self-efficacy receives a direct and negative effect from procrastination (structural weight of -.53). Lastly, intrinsic motivation receives an indirect effect from procrastination through self-efficacy.

The first-order latent variable of school perception is constituted by the observed variables: "How many of your teachers regularly attend online or remote classes" (factor loading of .66), "How many of your teachers are punctual in online or remote tutoring" (.72), "How many of your teachers genuinely strive to make their online classes understandable to most students" (.85), and "How many of your teachers encourage student participation to express doubts and questions online or remotely" (.81). The latent variable of self-efficacy consists of the manifest variables: "I believe that some subjects in my current degree program are challenging for me" (.70), "I believe that certain aspects of the profession I am currently studying for are difficult for me" (.84), and "I believe that I lack certain specific skills required in my degree program" (.71).

The achievement orientation dimension is composed of the observed variables: "Once I start something, I don't give up until I succeed" (.76), "When I encounter a challenging task, I persist until I master it" (.84), "I enjoy achieving things that pose a challenge to me" (.66), and "When I have to complete an assignment or task, I invest the time and effort needed to do it well" (.74). The latent variable of procrastination is constituted by the manifest variables: "When I have to do an assignment or task, I postpone it as much as possible" (.74), "In general, I overthink things before starting to work on them" (.80), "I usually struggle to finish school assignments on time because I start them late" (.78), "I frequently interrupt the completion of a complex or difficult task" (.75), "In general, I think a lot before starting to work on things" (.77), "I am somewhat apathetic towards completing my assignments and things that interest me" (.69), and "When I have to do a difficult task, I postpone it as much as possible" (.83).

Intrinsic motivation is constituted by the observed variables: "Several courses have sparked my desire to delve deeper into certain topics" (.61), "Several subjects have stimulated my interest in knowledge and learning" (.67), "In courses, I primarily strive to learn and acquire new knowledge" (.77), "In topics that interest me, I don't limit myself to reading what the professor assigns; I try to delve deeper and expand my information" (.67), and "I want to learn as much as possible" (.69). The similar factorial loadings between observed variables and

the defining factor indicate convergent construct validity (Bentler, 2006; Corral et al., 2001)

A positive covariance (.20) between school perception and achievement orientation was identified, along with a negative covariance between achievement orientation and procrastination (-.55). Additionally, a negative covariance between school perception and procrastination was estimated (-.16), indicating divergent construct validity as theoretically anticipated (Bentler, 2006; Corral et al., 2001).

Following the confirmatory factor analysis, an internal consistency analysis was conducted to estimate the reliability of the scales with the items from the resulting model for intrinsic motivation. The scales were found to be reliable, with alpha values of .79 for self-efficacy, .91 for procrastination, .83 for achievement orientation, .81 for intrinsic motivation, and .85 for school perception.

Table 2 reveals a moderate correlation between intrinsic motivation and achievement orientation, as well as weak negative correlations between self-efficacy and procrastination and between procrastination and intrinsic motivation.

The structural model explains 57% of the variance in the relationship between intrinsic motivation and self-efficacy, goal orientation, school perception, and procrastination (Figure 1).

Table 2.
Correlations

Variable	1	2	3	4	5
1. Self-efficacy	-				
2. Procrastination	,374**	-			
3. Achievement orientation	-,258**	-,453**	-		
4. Intrinsic motivation	-,252**	-,377**	,593**	-	
5. School perception	-,183**	-,126*	,165**	,279**	-

The model demonstrates an acceptable goodness-of-fit, with statistical values of $\chi^2(265) = 635$, $p = .05$, and practical indices of IBBANN = .91, CFI = .92, and RMSEA = .06 (90% CI [.05, .06]). The model's reliability indices were $\alpha = .66$ and RHO = .84, indicating that it possesses the same explanatory power as the saturated model, which accounts for all variable interrelations.

Discussion

This study aimed to test a model designed to understand the possible direct and indirect relationships between intrinsic motivation and variables such as achievement orientation, procrastination, and school perception among Colombian university students. The data analysis highlights the complexity of intrinsically motivated academic behavior, which considers skill development, positive motivational states, and self-regulation (Castañeda et al., 2012). These aspects may influence university students' performance, as observed in the sample analyzed.

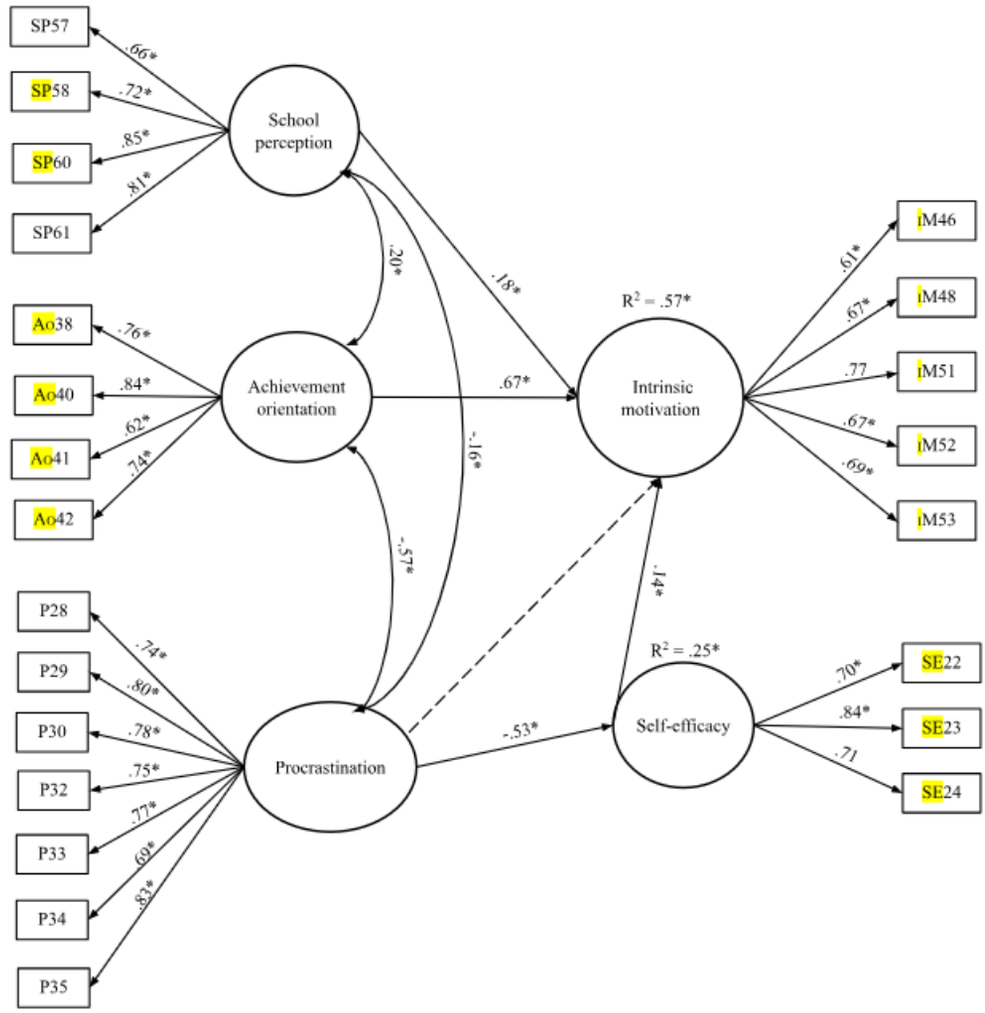
The results indicate that achievement orientation, school perception, and self-efficacy positively affect intrinsic motivation, while procrastination indirectly affects self-efficacy. This finding suggests that when students procrastinate, this behavior affects their self-efficacy (the perception of the need for regular action and the achievement of academic goals) and, consequently, their intrinsic motivation.

Students' challenges in the ERE context may have adversely affected self-efficacy. One challenge was difficulty in resolving questions during classes, which is more easily managed in face-to-face interactions between students and teachers (Yamin & Muzaffar, 2021). Another challenge was related to

perceived differences in teacher support and demands compared to traditional education (Mullen & Tallent-Runnels, 2006). A third challenge was the need for teacher training in online instruction, which complicated the teaching-learning process and potentially undermined students' self-efficacy (Zaharah & Kirilova, 2020). These challenges created obstacles to students' perceptions of their ability to meet academic demands, negatively impacting their intrinsic motivation.

In the ERE context, where intrinsic motivation is crucial for academic engagement and performance, a positive correlation was observed between achievement orientation and self-efficacy. Students with higher achievement orientation tend to employ deeper learning strategies, increasing their desire to demonstrate competence in academic tasks (Kadioglu & Uzuntiryaki-Kondacki, 2014).

Figure 1. Structural Model of Intrinsic Motivation among university students.ote: The factorial loadings are significant at p < .05. Goodness-of-fit indices: $\chi^2(265) = 635$, p = .00; IBBANN = .91, CFI = .92, RMSEA = .06 (.05, .06). The dotted line indicates a non-significant relationship. N = 389.



It is essential to highlight that intrinsic motivation serves as a protective factor for academic performance in both face-to-face and ERE settings, particularly during periods of adjustment and transition, such as confinement. This aspect is relevant as it influences students' commitment, reduces procrastination tendencies, and strengthens their engagement and perseverance in academic tasks (Cahyani et al., 2020). In both educational settings, teacher plays a crucial role as mediators of interest in academic tasks (Bautista et al., 2023). This is especially relevant in ERE, underscoring the importance of faculty adaptation to new technologies in the meaningful learning process. Enhancing digital pedagogical competence and instructional design skills among educators could help address the identified challenges and foster a more effective and motivating online learning environment.

The proposed model accounts for a greater proportion of variance in the relationship between intrinsic motivation, self-efficacy, achievement orientation, school perception, and procrastination compared to other models that have studied these variables in situations before the health emergency (Aguilar et al., 2002). This finding highlights the importance of considering the impact of changes in the educational environment on students' intrinsic motivation. In this sense, this study enables us to infer that, irrespective of context in which the variables we measured, there persists a direct and positive relationship between self-efficacy and achievement orientation (Aguilar et al., 2016; Pintrich & García, 1991), as well as a negative relationship between procrastination and self-efficacy (Aguilar et al., 2002; Tuckman, 1991). This understanding highlights the relevance of individual variables in the perception of performance.

However, we must recognize that we cannot generalize the scope of these results to other educational and cultural contexts. Therefore, we should consider the study's possible limitations include the lack of control over external variables such as participants' socioeconomic status, type of educational institution, access to technological resources, and family support. Considering these additional variables in future research could provide a more comprehensive understanding of the factors influencing Colombian university students' intrinsic motivation.

Also, it would be beneficial to incorporate extrinsic and social motivation variables in future research to obtain a more complete understanding of the factors that influence students' intrinsic motivation, particularly in remote learning environments. Additionally, one could explore how to adapt educational strategies to foster intrinsic motivation in students in these contexts.

Conclusion

This study contributes to understanding intrinsic motivation among Colombian university students. It suggests that fostering intrinsic motivation depends on factors such as school perception, achievement orientation, self-efficacy, and reducing procrastination. The findings indicate that these variables can inform interventions aimed at promoting intrinsic motivation and improving students' academic performance by emphasizing time management skills and task planning.

Furthermore, the relevance of conducting future research that compares the variables analyzed in this study in school situations is pointed out, especially in situations with different levels of academic load, for example, low demand vs. high demand. This approach would expand the study's scope and provide direction for further research.

The study acknowledges the importance of considering the context in which we collected the data, especially during confinement due to the health emergency, which may have influenced response quality due to various factors. Challenges associated with the transition to online methodologies are highlighted, such as excessive academic load, prolonged sedentary study periods, increased autonomy in academic work, emotional imbalances, questionnaire length, and distractions from concurrent activities. These aspects provide

a more complete vision of the possible limitations of the study.

One of the identified limitations of the use of a non-random sample, which restricts the generalizability of findings beyond the studied population. Future studies should implement probability sampling techniques to enhance the external validity of results.

References

Afzal, F., & Crawford, L. (2022). Student's perception of engagement in online project management education and its impact on performance: The mediating role of self-motivation. *Project Leadership and Society*, *3*. https://doi.org/10.1016/j.pls.2022.100057.

Aguilar, J., Valencia, A., Martínez, M. y Vallejo, A. (2002). Un modelo estructural de la motivación intrínseca en estudiantes universitarios. In A. Bazán & A. J. Arce (Eds.), *Estrategias de evaluación y medición del comportamiento en psicología* (pp. 165–185). Instituto Tecnológico de Sonora y la Universidad Autónoma de Yucatán.

Andrén, D., & Pettersson, N. (2020). Studying continuously during an university course - with experiences from the impact of the coronavirus COVID-19. *Working Paper, 12*. Retrieved from https://urn.kb.se/resolve?urn=urn:nbn:se:oru:diva-88284.

Bautista-Jacobo, A., Quintana-Zavala, M. O., & González, D. (2023). La enseñanza remota de emergencia durante la pandemia por la COVID-19: experiencias en universitarios mexicanos. *Apertura*, *15*(2), 54–73. http://doi.org/10.32870/Ap.v15n2.2420.

Bentler, P. (2006). EQS: Structural Equations Program Manual. BMPD Statistical Sofware, INC.

Cahyani, A., Listiana, I. D., & Larasati, S. P. D. (2020). Motivasi belajar siswa SMA pada pembelajaran daring di masa pandemi COVID-19 [High school students' learning motivation in online learning during the COVID-19 pandemic]. *Jurnal Pendidikan Islam, 3*(1), 123–140. https://doi.org/10.37542/iq.v3i01.57.

Calet, N., & Dumitrache, C. G. (2016). Características de los estudiantes de grado de las áreas Ciencias Sociales y Salud: autoconcepto, motivación y estrategias de aprendizaje. REDU. *Revista de Docencia Universitaria, 14*(2), 245–260. https://doi.org/10.36667/jp.V3i1.57.

Caso-Fuertes, A. M., & García-Sánchez, J. N. (2006). Relación entre la motivación y la escritura. *Revista Latinoamericana de Psicología, 38*(3), 477–492. https://doi.org/10.14349/rlp.v38i3.391.

Castañeda, S., Peñalosa, E., & Austria, F. (2012). El Aprendizaje complejo. Desafío a la educación superior. *Revista de Investigación en Educación Médica*, 1(3), 140–145.

Chóliz Montañés, M. (2004*). Psicología de la motivación: El proceso motivacional. Universidad de Valencia.* Retrieved from http://www.uv.es/~choliz.

Condori Araujo, E. I., Chumpitaz Caycho, H. E., Salazar Quispe, P. J., Torres Retamozo, M. I., & Quispe Odeña, W. G. (2021). Procesos cognitivos y motivación académica durante la pandemia del COVID-19. CIEG, *Revista Arbitrada del Centro de Investigación y Estudios Gerenciales, 52*, 39–50. Retrieved from: https://revista.grupocieg.org/wp-content/uploads/2021/10/Ed.5239-50-Condori-Araujo-et-al.pdf.

Corral, V., Frías, M., & González, D. (2001). Análisis Cuantitativo de Variables Latentes. Colección Textos Académicos. Universidad de Sonora.

Echeverri, Á. (2017). Control y valor de las tareas de aprendizaje: dos cosas que es bueno saber sobre la motivación de los estudiantes de traducción. *Hermeneus: Revista de la Facultad de Traducción e Interpretación de Soria*, (19), 60–85. https://doi.org/10.14198/hermeneo2017.19.04.

Esparragoza, R. (2021). *Students' perceptions of motivation and use of metacognitive self-regulated learning strategies in remote asynchronous elementary Spanish classes* [Doctoral dissertation]. The University of North Carolina at Charlotte. Retrieved from https://www.proquest.com/openview/90239e98c55c6929567069d250967971/1?pq-origsite=gscholar&cbl=18750&diss=y.

González, D., Maytorena, M. A., Lohr, F., & Carreño, E. A. (2006). Influencia de la perspectiva temporal y la morosidad académica en estudiantes universitarios. *Revista Colombiana de Psicología*, (15),15-24. https://www.redalyc.org/articulo.oa?id=80401503.

Gustiani, S. (2020). Students' motivation in online learning during COVID-19 pandemic era: A case study. *Holistics, 12*(2). https://doi.org/10.31227/osf.io/fhbw8.

Haftador, A. M., Shirazi, F., & Mohebbi, Z. (2021). Online class or flipped-jigsaw learning? Which one promotes academic motivation during the COVID-19 pandemic? BMC *Medical Education, 21*(1), 1–8. https://doi.org/10.1186/s12909-021-02508-4.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review, 27*(1), 1–12. Retrieved from: https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning.

Kadioglu, C. & Uzuntiryaki-Kondacki, E. (2014). Relationship between learning strategies and goal orientation: A multinivel analysis. *Eurasian Journal of Educational Research*, 56, 1–22. https://doi.org/10.14689/ejer.2014.56.4.

Lamanauskas, V., Makarskaitė-Petkevičienė, R., Gorghiu, G., Manea, V. I., & Pribeanu, C. (2021). Extrinsic and intrinsic motivation in online education during the pandemic as perceived by Lithuanian and Romanian university students. En Proceedings of the International Conference on Human-Computer Interaction-RoCHI 2021 (pp. 147–154). https://doi.org/10.37789/rochi.2021.1.1.23.

Lazcano, L. M., González-Chordá, V. M., Manrique-Abril, F. G., Cervera-Gasch, Á., Mena-Tudela, D., Andreu-Pejó, L., & Valero-Chillerón, M. J. (2022). Characteristics and determinants of the academic goals in nursing education: A cross-sectional study. *Nurse Education Today*. https://doi.org/10.1016/j.nedt.2022.105402.

Llanga Vargas, E.F., Murillo Pardo, J. J., Panchi Moreno, K. P., Paucar Paucar, M. M., & Quintanilla Orna, D. T. (2019). La motivación como factor en el aprendizaje. *Revista Atlante: Cuadernos de Educación y Desarrollo*, (31), 1–18. https://www.eumed.net/rev/atlante/2019/06/motivacion-aprendizaje.html.

Ma, M., Li, M., Wang, Q., Qiu, A., & Wang, T. (2022). Online self-regulated learning and academic procrastination: A moderated mediation model. *Psychology in the Schools*. https://doi.org/10.1002/pits.22594.

Malinauskas, R. K., & Pozeriene, J. (2020). Academic motivation among traditional and online university students. *European Journal of Contemporary Education*, *9*(3), 584–591. https://doi.org/10.13187/ejced.2020.3.584.

Martínez-Ariza, L., Cudris-Torres, L., Echeverría-King, L. F., & Niño-Vega, J. A. (2022). Influence of motivation on academic performance: An analysis of motivational assessment in mathematics learning. *Revista de Investigación, Desarrollo e Innovación*, *12*(1), 485–494. https://doi.org/10.19053/20278306.v12.n1.2022.14207.

Mullen, G. E., & Tallent-Runnels, M. K. (2006). Student outcomes and perceptions of instructors' demands and support in online and traditional classrooms. *Internet and Higher Education*, *9*(4), 257-266. https://www.learntechlib.org/p/102624/.

Navarro Roldan, C. P. (2016). Rendimiento académico: una mirada desde la procrastinación y la motivación intrínseca. *Revista Katharsis*, (21), 241–271. https://doi.org/10.25057/25005731.623.

Pelikan, E. R., Korlat, S., Reiter, J., Holzer, J., Mayerhofer, M., Schober, B., & Lüftenegger, M. (2021b). Distance learning in higher education during COVID-19: The role of basic psychological needs and intrinsic motivation for persistence and procrastination–a multi-country study. *PloS one*, *16*(10). https://doi.org/10.1371/journal.pone.0257346.

Pelikan, E. R., Lüftenegger, M., Holzer, J. et al. (2021a) Learning during COVID-19: the role of self-regulated learning, motivation, and procrastination for perceived competence. *Erziehungswiss* 24, 393–418. https://doi.org/10.1007/s11618-021-01002-x.

Quispe Quispe, M. D. R. (2023). *Motivación escolar y rendimiento académico de matemática en estudiantes de primaria, institución educativa estatal, San Martín de Porres – 2022*. [Tesis de Maestría]. Universidad César Vallejo, Lima, Perú. https://hdl.handle.net/20.500.12692/106418.

Ramírez Gallego, M. S. (2022). *Motivación Académica y Perspectiva Temporal en estudiantes universitarios* [Tesis de pregrado]. Universidad de Antioquia, El Carmen de Viboral, Colombia. https://bibliotecadigital.udea.edu.co/bitstream/10495/29164/29/RamirezSusana_2022_PerspectivaTemporalMotivacion.pdf.

Ryan, R. M., & Deci, E. L. (2000). La Teoría de la Autodeterminación y la Facilitación de la Motivación Intrínseca, el Desarrollo Social, y el Bienestar. *American Psychologist*, *55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68.

Stover, J. B., Uriel, F., De la Iglesia, G., Freiberg Hoffmann, A., & Liporace Mercedes, F. (2014). Rendimiento académico, estrategias de aprendizaje y motivación en alumnos de Escuela Media de Buenos Aires. *Perspectivas en Psicología: Revista de Psicología y Ciencias Afines*, *11*(2), 10–20.

Tuckman, B. W. (1991). El desarrollo y la validez concurrente de la escala de procrastinación. *Medición Educativa y Psicológica*, *51*(2), 473–480. https://doi.org/10.1177/0013164491512022.

Xu, J., Lio, A., Dhaliwal, H., Andrei, S., Balakrishnan, S., Nagani, U., & Samadder, S. (2021). Psychological interventions of virtual gamification within academic intrinsic motivation: A systematic review. *Journal of affective disorders*, 293, 444–465. https://doi.org/10.1016/j.jad.2021.06.070.

Yamin, G., & Muzaffar, R. (2021). Academic motivation and psychological well-being of university students taking online classes amid COVID-19 pandemic. *Bahria Journal of Professional Psychology*, *20*(2), 51–61. https://bjpp.bahria.edu.pk/index.php/bjpp/article/view/397/181.

Yapo, F., Tabiliran, J., Dagami, A., Navales, K., & Tus, J. (2021). The self-efficacy and academic motivation of the graduating college students during the COVID-19 pandemic in the Philippines. *International Journal of Advance Research and Innovative Ideas in Education*, *7*(3), 1310–1317. https://doi.org/10.6084/m9.figshare.14784885.v1.

Zaharah, Z., & Kirilova, G. (2020). Impact of Corona Virus Outbreak Towards Teaching and Learning Activities in Indonesia. SALAM: *JurnalSosial dan BudayaSyar-I*, *7*(3), 269–282. https://doi.org/10.15408/sjsbs.v7i3.15104.

doi: https://doi.org/10.15446/rcp.v34n2.116125

Work-related Stress, Secondary Traumatic Stress, Hardiness and Post-Traumatic Growth Among ICU Healthcare Workers in the Post-Pandemic Era

Mayda Portela
Universidad Católica de Uruguay

How to cite this article: Portela, M. (2025). Work-related Stress, Secondary Traumatic Stress, Hardiness and Post-Traumatic Growth Among icu Healthcare Workers in the Post-Pandemic Era. *Revista Colombiana de Psicología*, *34*(2), 127-138. https://doi.org/10.15446/rcp.v34n2.116125

Correspondence: Mayda Portela (https://orcid.org/0000-0001-7947-0563). Email: mportela@ucu.edu.uy

SCIENTIFIC RESEARCH ARTICLE

RECEIVED: AUGUST 06TH, 2024 - ACCEPTED: JANUARY 28TH, 2025

Work-related Stress, Secondary Traumatic Stress, Hardiness and Post-Traumatic Growth Among icu Healthcare Workers in the Post-Pandemic Era

Abstract

Health personnel working in intensive care units (ICUs) are particularly exposed to stressful situations and traumatic experiences in clinical settings. This study aims to analyze the impact of work-related stress and secondary traumatic stress in relation to hardiness and post-traumatic growth among healthcare professionals who provided care to patients affected by COVID-19 during the pandemic.

The sample consisted of 64 participants, including nurses and physicians from ICU settings, with an average age of 44 years. The findings indicate that work-related stress is higher among men and nurses; physicians score higher in responsibility for patient care; less work experience is associated with higher levels of work-related stress. Additionally, there is a direct relationship between hardiness and post-traumatic growth and an inverse relationship between hardiness and secondary traumatic stress. The study highlights the importance of further investigation into the impact and protective factors affecting this population group.

Keywords: work-related stress, secondary traumatic stress, hardiness, post-traumatic growth.

Estrés Laboral, Estrés Traumático Secundario, Personalidad Resistente y Crecimiento Postraumático en Personal Sanitario de UCI en Etapa De Postpandemia

Resumen

El personal sanitario que trabaja en unidades de cuidados intensivos (UCI) está particularmente expuesto a situaciones de estrés y experiencias traumáticas en entornos clínicos. Este estudio tiene como objetivo analizar los efectos del estrés laboral y el estrés traumático secundario en relación con la personalidad resistente y el crecimiento postraumático en profesionales de la salud que brindaron atención a pacientes afectados por COVID-19 durante la pandemia.

La muestra estuvo conformada por 64 participantes, entre enfermeros y médicos del área de UCI, con una media de edad de 44 años. Los resultados indican que el estrés laboral es mayor en varones y enfermeros; los médicos puntúan más alto en responsabilidad en el cuidado de los pacientes; menor experiencia laboral se asocia con mayores niveles de estrés laboral. Además, se observa una relación directa entre personalidad resistente y crecimiento postraumático, y una relación inversa entre personalidad resistente y estrés traumático secundario. El estudio enfatiza la importancia de seguir investigando el impacto y los factores de protección en este grupo poblacional.

Palabras clave: estrés laboral, estrés traumático secundario, personalidad resistente, crecimiento postraumático.

Introduction

In early 2020, the World Health Organization (WHO) declared a global pandemic due to the spread of the SARS-CoV-2 virus. During the first two years of the pandemic, Brazil reported the highest number of diagnosed cases in Latin America, with 30,617,786 cases, followed by Argentina with 9,101,319 cases. Uruguay ranked ninth, with 902,540 confirmed cases (Salud, 2022). These data illustrate the increased demand for medical care.

Healthcare personnel in medical institutions faced various stressors associated with the mass care of infected individuals, widespread societal fear, and the lack of established scientific protocols for treating the disease (Ruiz & Gómez, 2021).

Published studies indicate high levels of emotional exhaustion among healthcare workers, increased symptoms of anxiety and depression, and heightened psychological distress (Lozano, 2020; Montes & Ortúñez, 2021; Sánchez et al., 2021). A systematic review encompassing 33,062 participants concluded that anxiety had a combined prevalence of 23.2% in 12 of the 13 analyzed studies, while depression exhibited a prevalence rate of 22.8% across 10 studies. Furthermore, significant occupational differences were identified, with nurses experiencing higher levels of affective symptomatology than doctors (De Juan-Pérez, 2021).

In addition to the psychological impacts of anxiety, depression, and fear of contagion, stress and burnout were also prominent concerns (Danet, 2021). Nursing staff exhibited higher levels of burnout and psychosomatic symptoms than doctors. These symptoms were more prevalent among women and individuals who had either tested positive for the disease or had a close relative who had tested positive (Montes & Fernández, 2022). The risk factors of greatest psychiatric impact on healthcare personnel included living and working in a densely populated area, being female, job security perception, and being a resident doctor (Erazo & Saltos, 2021).

Most research highlights the impact of work-related stress on healthcare personnel, whether due to anxiety and depression levels or work overload and its connection to patient care. Cajamarca et al. (2023) found that more than half of healthcare professionals were exposed to stress and reported somatic conditions such as headaches, extremity pain, dizziness, constipation or diarrhea, nausea, fatigue, and insomnia. In this scenario of recognition of work stress and the consideration of the psychological impact on workers, it is reported that coping strategies present an inversely proportional correlation to the impact of stress, so that effective coping mechanisms reduce stress-related consequences (Delgado et al., 2021).

A previous study on ICU intensivists in Uruguay showed that work-related stress levels increased when the weekly workload exceeded 40 hours, with younger intensivists experiencing higher stress levels. Exposure to daily stressors was found to impair bodily functioning, leading to decreased self-confidence, reduced productivity, and job dissatisfaction (Casagrande et al., 2022).

Additionally, a national survey on disruptive behaviors among healthcare personnel due to work stress reported that 91% of respondents had witnessed disruptive conduct among medical personnel, and 61% of doctors reported being victims of such behaviors. This issue is of crucial relevance since it has direct effects on patient safety (Godino et al., 2012). These behaviors caused by stress refer to disturbing behaviors or personal behaviors, whether verbal or behavioral, that negatively affect patient care and can interfere with the ability to work with other professionals, altering the proper functioning of the health team.

In trauma studies, the concept of compassion fatigue refers to the secondary traumatic impact of attending to others' emotional distress (Figley, 1999). Compassion fatigue is usually suffered by professionals who provide care to victims of unexpected crises, such as terrorist attacks or natural disasters.

The concept of a hardy personality has been explored in health psychology as a protective factor against stress. It encompasses characteristics

such as a sense of control, commitment, and the ability to face challenges (Moreno et al., 2004). Hardy personality has an effect on the process of shattered assumptions in secondary traumatic stress. Therefore, this study aims to explore the interaction between hardiness and work demands to better understand the trauma process among emergency service workers (Moreno et al., 2007).

The general objective of this study was to examine work-related stress, secondary traumatic stress, hardy personality, and post-traumatic growth among healthcare personnel who worked in ICUs during the pandemic. The specific objectives were: 1) to provide a sociodemographic description of the sample, 2) to analyze the relationship between sociodemographic factors and the study variables, 3) to evaluate the levels of work-related stress and secondary traumatic stress among participants, 4) to assess the hardy personality traits of ICU healthcare personnel, and 5) to determine the correlation between hardy personality and post-traumatic growth.

Methodology

In line with the stated objectives, this study adopted a quantitative correlational approach with a non-experimental, cross-sectional design. Data analysis was conducted using the statistical software Jamovi Project, version 2.3 (Jamovi, 2022).

Ethical Considerations

This study had the approval of the University Ethics Committee (https://www.ucu.edu.uy/UCU/Comite-de-Etica-uc739) (Approval No. 230224) and the primary institution where the sample was collected. Additionally, the study was registered with the Ministry of Public Health under project registration number 7765132.

Procedure

An online survey was conducted using the Qualtrics platform from April to November 2023. The questionnaires were distributed through various digital channels, including WhatsApp, email, LinkedIn, Facebook, X, and Instagram, allowing participants to answer using their smartphones, tablets, or computers. The survey began with an introduction outlining the study's objectives and clearly stating that participation was voluntary, anonymous, and confidential. It was explicitly mentioned that individual responses from identifiable staff members would not be accessible to their respective health centers —only the overall results—. Finally, participants were required to provide explicit consent before proceeding with the study.

The inclusion criteria included medical professionals, nursing staff, and technical personnel working in public and private healthcare institutions within the city and other regions of the country who had worked in adult and/or pediatric intensive care units (ICUs) during the pandemic.

Participants

The sample consisted of 64 participants (N = 64), including medical workers and nursing staff employed in intensive care unit (ICU) departments of public and private hospitals. The majority (56.3%) were from the private health sector in the capital, while 43.7% were from other regions of the country. Of the participants, 75% were female, and 25% were male. Their ages ranged from 26 to 67 years, with a mean age of 44.14 years (SD = 10.32) and a mean of 16.08 years of work experience (SD = 11.2).

Research Instruments

- **Sociodemographic Survey:** An ad hoc survey collected information on gender, age, marital status, family structure, birthplace, workplace, occupational domain, tenure in the position, work schedules, and on-call shifts.
- **Fear of covid-19 Scale (fcv-19S; Ahorsu et al., 2020):** The Spanish adaptation of this questionnaire consists of seven items measuring fear of contagion. Responses are recorded on a five-point Likert scale ranging from "strongly agree" to "strongly disagree". This scale assesses the intensity of fear of COVID-19 contagion, categorized as low, moderate, or high. The original authors reported

satisfactory performance in both classical test theory and the Rasch model. Reliability was demonstrated through internal consistency (α = .82) and test-retest reliability (ICC = .72).

- **Health Professions Stress Inventory (Wolfgang, 1988):** The Spanish-adapted version (Palacios & Morán, 2014) consists of 30 Likert-type items with response options ranging from 0 (never) to 4 (very frequently). Total scores indicate levels of stress, ranging from minimal to severe. The instrument assesses four dimensions: personal recognition, responsibility for patient care, conflict at work, and uncertainty. The Spanish version reports a Cronbach's alpha of .91.
- **Secondary Traumatic Stress Scale (stss; Moreno et al., 2004):** The Spanish version measures antecedent variables of stress, personality variables, and the social, occupational, and physical consequences of stress. The questionnaire employs a Likert-type response format ranging from "strongly disagree" to "strongly agree". It provides an overall score categorized as low, moderate, or high and includes three dimensions: compassion fatigue, secondary trauma symptoms, and shattered assumptions. The authors reported a Cronbach's alpha of .76.
- **Hardy Personality Questionnaire (Moreno et al., 2000):** This questionnaire consists of 21 items designed to assess three dimensions of the hardy personality construct: control, commitment, and challenge. Respondents rate each item on a scale from (1) "strongly disagree" to (4) "strongly agree". Higher scores indicate greater hardiness. The instrument showed adequate internal consistency (α = .86), with factor coefficients ranging from .75 to .81.
- **Post-Traumatic Growth Inventory (Vázquez et al., 2006):** The Spanish-adapted version consists of 21 items designed to assess perceived benefits following traumatic events. Responses are recorded on a Likert-type scale ranging from 0 (no change) to 5 (major change). The instrument provides an overall score categorized as low, medium, or high in terms of post-traumatic growth. Esparza et al. (2016) reported a Cronbach's alpha of .92.

Data Analysis

Prior to conducting statistical analyses, anomalous data, including incomplete or blank responses, were excluded. A general descriptive analysis was then performed, followed by stratified analyses based on gender and occupational domain within the healthcare system (i.e., nurses and doctors). Subsequently, correlations between the aforementioned variables were analyzed. A linear regression analysis was conducted with post-traumatic growth as the dependent variable. Finally, a path analysis model was performed with the variables described above to assess the result of the interaction of all the variables from the regression results. The statistical software Jamovi Project version 2.3 was employed for data analysis.

Results

89.1% of the participants reported having worked throughout the pandemic, 1.6% did not work during the entire pandemic having requested medical certification, while 9.4% began their work during the middle stage of the pandemic, when the vaccine had already been introduced into the country. It is noteworthy that most study participants worked throughout the entire COVID-19 pandemic period.

Regarding place of residence and employment, 56% of participants worked in medical institutions in Montevideo, while 44% were employed in other regions of the country, distributed as follows: 6.3% in Canelones, 6.3% in Cerro Largo, 1.6% in Lavalleja, 7.8% in Maldonado, 1.6% in Paysandú, 17.2% in Salto, 1.6% in San José, and 1.6% in Tacuarembó.

In terms of healthcare sector distribution, 82.8% of participants worked in private healthcare institutions, while 17.2% were employed in the public sector.

Descriptive data related to participants' occupation, occupational domain, and work schedules are presented in Table 1 below.

Table 1.
Descriptive data of the sample

	n (%)
Occupation healthcare	
Nurse	34 (53.1)
Doctor	27 (42.2)
Others	3 (4.7)
Work domain	
Adults ICU	50 (78.1)
Pediatric ICU	6 (9.4)
Intermediate care	8 (12.5)
Work schedules	
Morning	10 (15.6)
Afternoon	11 (17.2)
Night	14 (21.9)
All shifts	29 (45.3)

Regarding work experience, participants reported tenures ranging from 2 to 45 years, with a mean tenure of 16.08 years (SD 11.23), of which the average for the female gender is 14.5 while for the male gender the average is 20 years.

Table 2.
Analysis of the variables based on gender and occupational domain

Gender	Statistical	P	Effect size
Total_WRS	1.132	0.262	0.3267
Total_STS	0.283	0.778	0.0816
Total_HP	1.629	0.108	0.4702
Total_PTG	-0.785	0.436	-0.2265
Occupation			
Total_WRS	-0.154	0.561	-0.0386
Total_STS	-0.101	0.540	-0.0252
Total_HP	-0.534	0.703	-0.1339
Total_PTG	-0.498	0.690	-0.1248

Table 3.
Correlation between work-related stress and secondary traumatic stress

		Work-related stress	Personal recognition	Responsibility for patient care	Conflict at work	Uncertainty
Secondary traumatic stress	R	0.636 ***	0.543 ***	0.499 ***	0.525 ***	0.510 ***
	P value	<.001	<.001	<.001	<.001	<.001
	Upper IC 95%	0.762	0.696	0.664	0.683	0.671
	Lower IC 95%	0.462	0.343	0.289	0.320	0.302
Compassion fatigue	R	0.548 ***	0.606 ***	0.248 *	0.452 ***	0.388 **
	P value	<.001	<.001	0.048	<.001	0.002
	Upper IC 95%	0.700	0.742	0.466	0.628	0.578
	Lower IC 95%	0.350	0.424	0.002	0.232	0.157
Symptoms of secondary trauma	R	0.316 *	0.139	0.448 ***	0.271 *	0.270 *
	P value	0.011	0.273	<.001	0.031	0.031
	Upper IC 95%	0.521	0.372	0.625	0.484	0.484

		Work-related stress	Personal recognition	Responsibility for patient care	Conflict at work	Uncertainty
Shattered assumptions	Lower IC 95%	0.076	-0.111	0.227	0.026	0.026
	R	0.542 ***	0.491 ***	0.347 **	0.433 ***	0.477 ***
	P value	<.001	<.001	0.005	<.001	<.001
	Upper IC 95%	0.695	0.657	0.546	0.614	0.647
	Lower IC 95%	0.341	0.278	0.111	0.210	0.262

Note. * p < .05, ** p < .01, *** p < .001. FCV= *fear of* COVID; WRS= *work-related stress;* STS= *secondary traumatic stress;* HP= *hardy personality;* PTG= *post-traumatic growth.*

Analysis of Variables

The analysis of the variables (Table 2) —work-related stress, secondary traumatic stress, hardy personality, and post-traumatic growth— by gender and occupational domain indicates that work-related stress is higher among men, whereas post-traumatic growth is higher among women.

When considering the occupational domain (doctors vs. nurses), nurses exhibit higher levels of work-related stress, hardy personality, and post-traumatic growth than doctors. Work-related stress is higher among nurses in the dimensions of personal recognition and uncertainty, whereas in the dimension of responsibility for patient care, it is higher among doctors. In the dimensions of commitment and control, nurses score higher than doctors, with no significant differences in the challenge dimension.

When assessing work-related stress and secondary traumatic stress based on tenure in the position (categorized as less than 10 years vs. more than 10 years of work experience), results indicate that those with less experience report higher levels of both work-related stress and secondary traumatic stress, alongside lower levels of hardiness. In contrast, healthcare personnel with more experience exhibit higher levels of hardiness and lower levels of both work-related stress and secondary traumatic stress.

As seen in Table 3, all dimensions of work-related stress show significant correlations with dimensions of secondary traumatic stress, except for personal recognition, which does not correlate with secondary stress symptoms.

Based on the results presented in Table 4, which analyzes the interplay among the variables' dimensions, secondary traumatic stress in its *compassion fatigue* dimension exhibits significant correlations with personal recognition (t = .54, p < .001), responsibility for patient care (t = .60, p < .001), and uncertainty (t = .45, p < .001). Additionally, the *shattered assumptions* dimension correlates significantly with personal recognition (t = .54, p < .001) and responsibility for patient care (t = .49, p < .001).

Moreover, there is a negative correlation between the *control* (t = - .48, p < .001) and *challenge* (t = - .46, p < .001) dimensions and secondary traumatic stress, indicating that higher levels of control and challenge are associated with lower levels of secondary trauma.

Figure 1. Path analysis model with the studied variables. Note. *p < .05.

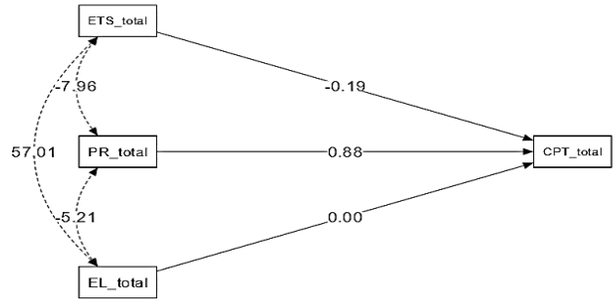


Table 4.
Correlations between fear of COVID-19, work-related stress, secondary traumatic stress, hardy personality and posttraumatic growth.

		FCV		WRS_pers		WRS_respon_care		WRS_confict_ at_ work		WR
WRS_total	R	0.06		—						
	p	0.60		—						
WRS_pers	R	,-0.07		0.85	***	—				
	p	0.54		<.00		—				
WRS_respon_care	R	0.06		0.63	***	0.36	**	—		
	p	0.58		<.00		0.00		—		
WRS_confict at work	R	0.06		0.91	***	0.68	***	0.54	***	
	p	0.60		<.00		<.00		<.00		
WRS_uncertainty	R	0.22		0.80	***	0.58	***	0.34	**	
	p	0.07		<.00		<.00		0.00		
STS_total	R	0.06		0.63	***	0.54	***	0.49	***	
	p	0.59		<.00		<.00		<.00		
STS comp fatigue	R	,-0.19		**0.54**	***	**0.60**	***	0.24	*	
	p	0.12		<.00		<.00		0.04		
STS_sec trauma	R	0.23		0.31	*	0.13		0.44	***	
	p	0.05		0.01		0.27		<.00		
STS_shattered assumptions	R	0.06		**0.54**	***	**0.49**	***	0.34	**	
	p	0.62		<.00		<.00		0.00		
HP_total	R	0.22		,-0.04		,-0.15		0.27	*	
	p	0.07		0.71		0.23		0.02		
HP_commitment	R	0.07		0.05		,-0.02		0.26	*	
	p	0.58		0.66		0.87		0.03		
HP_control	R	0.27	*	,-0.03		,-0.14		0.26	*	
	p	0.03		0.75		0.25		0.03		
HP_challenge	R	0.24		,-0.13		,-0.22		0.19		
	p	0.05		0.28		0.07		0.11		
PTG_total	R	0.02		,-0.04		,-0.10		,-0.02		
	p	0.86		0.75		0.40		0.83		
PTG_relation_w/ others	R	0.02		,-0.09		,-0.13		,-0.05		
	p	0.81		0.45		0.29		0.68		
PTG_new_ possibilities	R	,-0.02		,-0.03		,-0.09		,-0.01		
	p	0.84		0.80		0.43		0.92		
PTG_personal_ strength	R	0.03		,-0.00		,-0.07		,-0.01		
	p	0.77		0.97		0.56		0.92		
PTG_spiritual	R	0.12		0.02		,-0.06		,-0.01		
	p	0.32		0.85		0.59		0.89		
PTG_life_ appreciation	R	0.05		,-0.10		,-0.14		,-0.12		
	p	0.64		0.430		0.27		0.32		

Note. * p < .05, ** p < .01, *** p < .001. *FCV= fear of COVID; WRS= work-related stress; STS= secondary traumatic stress; HP= hardy personality; PTG= post-traumatic growth.*

WRS_uncertainty		STS_total		STS_comp_ fatigue		STS_sec_ trauma		STS_shattered_ assumptions
—								
—								
0.68	***	—						
<.00		—						
0.52	***	0.51	***	—				
<.00		<.00		—				
0.45	***	0.38	**	**0.73**	***	—		
<.00		0.00		<.00		—		
0.27	*	0.27	*	0.70	***	0.13		—
0.03		0.03		<.00		0.28		—
0.43	***	**0.47**	***	**0.69**	***	**0.49**	***	0.18
<.00		<.00		<.00		<.00		0.15
-0.01		,-0.16		,-0.23		,-0.50	***	0.07
0.90		0.19		0.06		<.00		0.55
0.05		,-0.04		,-0.13		,-0.35	**	0.08
0.69		0.73		0.27		0.00		0.50
0.00		,-0.15		,-0.23		,-0.48	***	0.04
0.98		0.21		0.06		<.00		0.72
,-0.09		,-0.22		,-0.23		,-0.46	***	0.06
0.47		0.07		0.06		<.00		0.58
,-0.03		0.06		,-0.10		,-0.20		0.02
0.80		0.60		0.41		0.09		0.85
,-0.09		0.00		,-0.06		,-0.17		0.06
0.45		0.97		0.62		0.17		0.61
0.00		0.03		,-0.10		,-0.15		,-0.05
0.98		0.79		0.42		0.22		0.65
,-0.01		0.12		,-0.10		,-0.19		0.02
0.91		0.33		0.41		0.12		0.82
0.07		0.10		,-0.09		,-0.21		0.04
0.55		0.42		0.44		0.09		0.72
,-0.11		0.08		,-0.22		,-0.31	*	,-0.04
0.35		0.52		0.074		0.01		0.74

Finally, a path analysis was conducted to assess the relationships among all variables (see Figure 1). The results of this model, with a goodness-of-fit index indicating CFI = 1, TLI = 1, and GFI = 0.998, show an inverse relationship between hardy personality and both secondary traumatic stress and work-related stress. Additionally, the analysis reveals an inverse relationship between secondary traumatic stress and posttraumatic growth, as well as a positive relationship between hardy personality and posttraumatic growth.

Table 5.
Variable coefficients

				95% Confidence Intervals				
Dep	**Pred**	**Estimate**	**SE**	**Lower**	**Upper**	**β**	**z**	**p**
PTG_total	EL_total	-0.00398	0.0504	-0.103	0.0948	-0.00354	-0.0791	0.937
PTG_total	PR_total	0.92041	0.2011	0.526	1.3145	1.01333	4.5775	< .001
PTG_total	ETS_total	-0.13709	0.4128	-0.946	0.6719	-0.07334	-0.3321	0.740

Discussion

The aim of this study was to investigate the relationship between work-related stress, secondary traumatic stress, hardy personality, and post-traumatic growth in healthcare personnel working in ICUs during the COVID-19 pandemic. It was hypothesized that secondary traumatic stress would be associated with work-related stress and that, in relation to hardy personality, it would be linked to post-traumatic growth. This hypothesis was based on the premise that ICU personnel faced an unexpected change that significantly increased the stress inherent to their already demanding work functions.

In the first place, it was observed that work-related stress was higher in men and nurses, who exhibited elevated levels of personal recognition, uncertainty, commitment, and control, while doctors reported higher scores in responsibility for patient care. These findings align with the research by De Juan-Pérez (2021), which highlights the greater emotional impact on nursing staff compared to doctors. On the other hand, it was observed that post-traumatic growth was higher in women.

Participants with less work experience exhibited higher levels of work-related stress and lower levels of hardiness, whereas those with longer tenures demonstrated higher levels of hardiness and were less affected by work-related stress. These findings are consistent with a previous study by Casagrande et al. (2022) conducted in the same country, which showed a similar trend.

A connection was observed between hardy personality and post-traumatic growth, particularly in the domains of new possibilities, commitment, and personal strength.

Regarding secondary traumatic stress, the dimension of compassion fatigue correlated with personal recognition, responsibility for patient care, and uncertainty. Additionally, shattered assumptions correlated with personal recognition and responsibility for patient care. Conversely, an inverse relationship was found between hardy personality (control and challenge) and secondary trauma, indicating that individuals with hardier personalities exhibited lower levels of secondary trauma involvement.

Our study has some limitations. Firstly, the sample size was small, which restricts the generalizability of the findings. Additionally, most participants were employed in the private sector. However, it is noteworthy that most participants worked throughout the entirety of the pandemic, experiencing various stages, including the intermediate phase marked by the introduction of vaccines and the subsequent return to normal ICU clinical care.

Another limitation relates to the study's cross-sectional design, which measures variables at a

single point in time. For this reason, we believe that experimental or longitudinal studies would be more appropriate to further explore these findings and determine the nature of the relationships identified.

Nevertheless, the data obtained in this study underscore the importance of evaluating and addressing this population group from the perspective of strengthening psychological resources as protective factors for mental health.

Conclusions

The data obtained in this study suggest that ICU healthcare personnel exhibit certain affectation in connection with work-related stress and secondary stress. Moreover, it appears that hardy personality can regulate the effects of this affectation and have an impact on post-traumatic growth, being a protective factor against both work-related stress and secondary traumatic stress arising from professional duties.

However, further research is required in this population group, and that such investigations should delve deeper into other factors of vulnerability and protection, employing in-depth analyses and longitudinal evaluations of the stressors encountered in ICU healthcare settings.

Justification

Although this study has the limitations mentioned above, so that the data are generalizable, it is considered that it is a starting point for future research in a poorly studied population and in a particularly uncertain time that increased the level of stress, to the normal work activity of this study group. Therefore, it would be from a good start, just like other papers that continued investigating an incipient topic.

Finally, some findings from this study may be useful for the prevention and promotion of healthcare workers' well-being. The results suggest that hardy personality serves as a protective factor that mitigates the effects of work stress and could be enhanced through preventive psychological interventions.

The researchers declare that there is no conflict of interest.

References

Ahorsu, D., Ying, C., Imani, V., Saffari, M., Graffiths, M., & Pakpour, A. (2020). La escala del miedo al COVID-19: desarrollo y validación inicial. *Revista Internacional de Salud Mental y Adicciones*. https://doi.org/https://doi.org/10.1007/s11469-020-00270-8

Cajamarca, K., Aimara, Sánchez, M., Acosta, E., & Llanos, J. (2023). Estres y manifestaciones somáticas en personal de salud . *Revista Latinoamericana de Ciencias Sociales.* https://doi.org/10.56712/latam.v4il.438

Calhoun, L., & Tedeschi, R. (1999). *Facilitating posttraumatic growth: A clinician's guide.* Lawrence Erlbaum Associates.

Casagrande, C., Soto, J., Haedo, M., Carámbula, A., & Burghi, G. (2022). Estrés laboral en los intensivistas de Uruguay. *Revista Médica Uruguaya*. https://doi.org/doi: 10.29193/rmu.38.1.6

Danet,A.(2021). Impacto psicológico del COVID-19enprofesionales sanitarios de primera línea en el ámbito occidental. Una revisión sistemática. *Medicina Clínica*, 449–458 doi: 10.1016/j.medcli.2020.11.009.

De Juan-Pérez, A. (2021). Prevalence of depression, anxiety, and insomnia among healthcare workers during theCOVID-19pandemic: A systematic review and meta-analysis. *Archivos de prevención de riesgos laborales*. doi:10.12961/aprl.2021.24.03.08.

Delgado.N., Cerda, L., & Castillos, J. (2023). Afrontamiento al estrés como predictor del crecimiento postraumático en población peruana durante la COVID-19 . *Revista de Investigación en Psicología, 26*(1), 61–76. https://doi.org./10.15381/rinvp.v26i1.24484

Erazo, E., M., V., & Saltos, I. (2021). Factores relacionados con efectos adversos psiquiátricos en personal de salud durante la pandemia de COVID-19 en Ecuador. *Revista Colombiana de Psiquiatría*. https://doi.org/10.1016/j.rcp.2020.12.007.

Esparza, T., Leibovich, N., & Martínez, T. (2016). Propiedades psicométricas del Inventario de Crecimiento Postraumático en pacientes oncológicos en población

argentina. *Ansiedad y Estrés, 22*(2-3), 97–103. https://doi.org/doi: 10.1016/j.anyes.2016.06.002

Figley, C. (1999). Compassion fatigue as secondary traumatic stress disorder: An overview. *Compassion fatigue: coping with secondary traumatic stress disorder in those who the traumatized* (pp. 1–20). Brunner-Rouytledge.

Godino, M., Barbato, M., Ramos, L., Otero, M., & Briozzo, L. (2014). Encuesta Nacional de Comportameintos Disruptivos en el Equipo de Salud . *Revista Médica del Uruguay, 30*(4), 235–246.

Jamovi. (2022). *The Jamovi Project 2.3*. https://www.jamovi.org/.

Lozano, A. (2020). Impacto de la epidemia del Coronavirus (COVID-19) en la salud mental del personal de salud y en la población general de China. *Revista deNeuro-Psiquiatría, 83*(1), http://dx.doi.org/10.20453/rnp.v83i1.3687

Montes, B. & Fernández, E. (2022). El efecto de la pandemia en la salud y Síndrome de Burnout en profesionales de enfermería de UCI. *Enfermeria Global*. https://doi.org/10.6018/eglobal.483261.

Montes, B. & Ortúñez, M. (2021). Efectos psicológicos de la pandemia COVID 19 en el personal del ámbito sanitario. *Enfermería global, 20*(62), https://dx.doi.org/10.6018/eglobal.427161.

Moreno, B., Garrosa, E., & González, J. (2000). Escala de personalidad resistente (CPR) el desgaste profesional de enfermería. Desarrollo y validación factorial del CDPE. *Archivos Prevención de Riesgos Laborales, 3*(1), 18–28.

Moreno, B., Morante, B., Rodríguez, A. & Garrosa, E. (2004). Secondarytraumatic stress as psychosocial emergent risk. *Psychology & Health*.

Moreno, B., Morante, M., Hudnall, B., & Sanz, A. (2007). Estrés traumático secundario:pesonalidad y sacudida de creencias. *Psicología Conductual, 15*(3), 427–438. www.behavioralpsycho.com/producto/estres-traumatico-secundario-personalidad-y-sacudida-de-creencias

Palacios, M., & Morán, I. (2014). Validación del inventario de Wolfgang en médico mexicanos. Medición del estrés laboral en hospitales. *Revista Mexicana de Salud en el Trabajo*, 6–8.

Ruiz, C., & Gómez, J. (2021). Efectos de la pandemia por COVID-19enla salud mental de la población trabajadora. *Archivos de Prevención de Riesgos Laborales, 24*(1), https://dx.doi.org/10.12961/aprl.2021.24.01.01.

Salud, E. I. (2022). *Statista*. Statista: https://es.statista.com/estadisticas/1105121/numero-casos-covid-19-america-latina-caribe-pais/

Sánchez, J., González, T., Pool-García, S., López, M., & Tovilla, C. (2021). Estado emocional y psicológico del personal de enfermería agredido durante la pandemia deCOVID-19 en Latinoamérica. *Revista Colombiana de Psiquiatría*. 10.1016/j.rcp.2021.08.006.

Vázquez, C., Pérez, P. & Matt, G. (2006). Post-traumatic stress reactions following the Madrid March 11, terrorist attacks: A cautionary note about the measurement of psychological trauma. *Spanish Journal of Psychology,* 161–174.

doi: https://doi.org/10.15446/rcp.v34n2.115817

Prácticas Culturales de Cuidado de la Salud Mental y su Relación con la Construcción de Paz en Los Montes de María, Colombia

DENNYS GARCÍA-PADILLA
Pontificia Universidad Javeriana

MARÍA-JULIANA REYES-RIVERA
Pontificia Universidad Javeriana

DIANA CAROLINA RUBIO-LEÓN
Pontificia Universidad Javeriana

PABLO ABITBOL
Universidad Tecnológica de Bolívar

LAURA CANO-SIERRA
Pontificia Universidad Javeriana

WILSON LÓPEZ-LÓPEZ
Pontificia Universidad Javeriana

HUSEYIN CAKAL
Keele University

CLAUDIA PINEDA-MARIN
Fundación Universitaria Konrad Lorenz; Keele University

How to cite this article: García-Padilla, D., Reyes-Rivera, M.-J., Rubio-León, D. C., Abitbol, P., Cano-Sierra, L., López-López, W., Cakal, H. and Pineda-Marin, C. P. (2025). Prácticas culturales de cuidado de la salud mental y su relación con la construcción de paz en los Montes de María, Colombia. Revista Colombiana de Psicología, 34(2), 139-165. https://doi.org/10.15446/rcp.v34n2.115817

Correspondence: Wilson López-López (https://orcid.org/0000-0002-2964-0402). Email: lopezw@javeriana.edu.co

SCIENTIFIC RESEARCH ARTICLE

RECEIVED: JULY 16TH, 2024 - ACCEPTED: AUGUST 27TH, 2024

Cultural Practices of Mental Health Care and their Relationship to Peacebuilding in Montes de María, Colombia

Abstract

This study identified and analyzed the cultural practices related to mental health care and their connection to peacebuilding in communities from Montes de María, a region in Colombia affected by armed conflict. Focus groups were conducted with 140 social leaders from the region. The analysis of the results was guided by techniques derived from grounded theory, as well as Mattaini's theory of cultural practices. Three cultural practices related to mental health care were identified: 1) Gathering with family members, friends, leaders, and other community members, 2) Setting value-driven goals and taking actions to achieve them, and 3) Engaging in artistic or artisanal activities. The results showed the positive impact of these practices in terms of emotional and social/relational benefits, community effects on socioeconomic aspects, and progress in territorial peacebuilding. These findings have implications for psychosocial support processes and peacebuilding efforts.

Keywords: artistic practices; community encounters; cultural practices; mental health; peacebuilding

Prácticas culturales de cuidado de la salud mental y su relación con la construcción de paz en los Montes de María, Colombia

Resumen

Este estudio identificó y analizó prácticas culturales de cuidado de la salud mental y su relación con la construcción de paz en comunidades de los Montes de María, una región de Colombia afectada por el conflicto armado. Se realizaron grupos focales con 140 líderes sociales de esa región. El análisis de resultados estuvo guiado por técnicas derivadas de la teoría fundamentada, así como de la teoría de prácticas culturales de Mattaini. Se identificaron tres prácticas culturales de cuidado de la salud mental: 1) Reunirse con familiares, amigos, líderes y otros miembros de las comunidades; 2) plantear metas de valor y realizar acciones para alcanzarlas; y 3) desarrollar actividades artísticas o artesanales. Los resultados mostraron el impacto positivo de las prácticas en términos de: beneficios en lo emocional y social/relacional, efectos comunitarios en aspectos socioeconómicos y en avances en la construcción de la paz territorial. Estos resultados tienen implicaciones para los procesos de acompañamiento psicosocial y de construcción de paz.

Palabras clave: construcción de paz; encuentro comunitario; prácticas artísticas; prácticas culturales; salud mental.

Introducción

La construcción de paz es un proceso complejo y multidimensional que compromete múltiples actores y procesos (López-López & Taylor, 2021), y que exige afrontar, tanto los factores que generan y reproducen los conflictos sociales y armados, como las diversas consecuencias que se derivan de ellos, y que muchas veces contribuyen a su profundización y degradación. En este sentido, la salud mental es un importante factor de persistencia del conflicto armado y, por lo tanto, un elemento clave para la construcción de paz (Abitbol, 2023). Muchas comunidades que han vivido o viven en medio de estas condiciones desarrollan variadas prácticas comunitarias de cuidado y autocuidado. Así, identificar estas prácticas resulta determinante para comprender, no solo cómo han aprendido a cuidar su salud ante la precariedad y la fragilidad de las infraestructuras institucionales, sino además cómo estas prácticas inciden en los tránsitos necesarios para construir y consolidar la paz en los territorios.

Montes de María es una subregión del caribe colombiano compuesta por 15 municipios en los departamentos de Bolívar y Sucre, la cual ha estado especialmente afectada por el conflicto armado del país, siendo escenario de hechos victimizantes como homicidios (3 919), desplazamiento forzado (153 734), secuestros (772), masacres (70), tomas guerrilleras (8), violencia sexual, entre otros (FUCUDE et al., 2020). Aunque se disminuyó la intensidad del conflicto armado después del proceso de paz con las FARC-EP en 2016, siguieron presentándose hechos de violencia en el territorio, relacionados con la presencia de actores estatales, grupos disidentes, grupos paramilitares y nuevas organizaciones ilegales (Tamayo-Agudelo y Bell, 2019). Estos hechos han llevado a Montes de María a ser un epicentro de violencia, lo que ha dejado cicatrices en su población; se reportan índices de Trastorno de Estrés Postraumático, Ansiedad Generalizada y Depresión Mayor por encima del promedio en Colombia (Ramírez-Giraldo et al., 2017). También se presentan problemas como disfunciones sexuales, psicosis y cambios comportamentales importantes (MPDL, 2017).

La investigación en Colombia da cuenta de los efectos que tiene el conflicto armado en la salud mental, por ejemplo, en regiones como Caldas, el Cauca o el sur de Bolívar se han encontrado afectaciones como trastornos del estado del ánimo, especialmente relacionados con estrés, depresión, ansiedad (Castaño et al., 2018., Moreno-Murcia et al., 2021; Ramírez et al., 2016; Tobar et al., 2019); además de consumo de sustancias (Sánchez et al., 2022). Estos escenarios implican consecuencias psicosociales como la destrucción del tejido social y familiar (Moreno-Murcia et al., 2021), pérdida de redes de apoyo, estigmatización, y dificultades de acceso a los servicios y garantías (Moreno-Murcia et al., 2021).

Bajo esta situación de violencia, las comunidades víctimas, organizaciones no gubernamentales y/o movimientos sociales de los Montes de María han desarrollado e implementado múltiples estrategias pertinentes culturalmente para el cuidado personal y comunitario, con el fin de hacer frente al impacto negativo que ha tenido el conflicto armado en la salud mental (Arnoso et al., 2017; GRMH, Organización de Poblaciones Desplazadas, OPDS, Equipo de Comunicación Rural OPDS Montes de María, Corporación Desarrollo Solidario, CODHES, y USAID, 2017). El desarrollo de estas estrategias ha tenido lugar en el marco del abandono Estatal que presenta la región (Hernández-Holguín, 2022; Sarmiento-Marulanda et al., 2021), de manera que las prácticas son llevadas a cabo por los miembros de la comunidad dentro de su cotidianidad, sin que necesariamente hayan sido impulsadas por instituciones u organizaciones.

Estrategias comunitarias de cuidado en salud mental

La experiencia de los Montes de María es consistente con lo que reporta la literatura a nivel nacional, la cual ha evidenciado que los grupos sociales adoptan estrategias para lidiar con las dinámicas y consecuencias de los contextos

violentos. Así, se ha encontrado que la mayoría de esas acciones son realizadas en el ámbito comunitario y familiar, y que estos grupos suelen utilizar sus fortalezas y recursos en pro de sus miembros (Martínez Chaparro et al., 2020; Perdomo et al., 2021). Por una parte, los grupos familiares recurren a prácticas de apoyo emocional y económico (Lopez Jaimes et al., 2020; Martínez Chaparro et al., 2020; Zamora-Moncayo et al., 2021), así como a acciones que promueven el desarrollo de habilidades de comunicación y adaptación, permitiendo resignificar las experiencias dolorosas (Lopez Jaimes et al., 2020; Martínez Chaparro et al., 2020).

Se han identificado múltiples estrategias de afrontamiento colectivo, siendo los grupos comunitarios espacios de interacción, fortalecimiento de lazos y empatía (Bonilla-Escobar et al., 2017). Una primera estrategia se encuentra en el apoyo social y solidaridad reflejadas en la asistencia frecuente a espacios de encuentro, lo que posibilita la catarsis, escucha, resignificación de los eventos negativos y reconstrucción del tejido social (Árias López, 2019; Bello- Tocancipá y Aranguren Romero, 2020; Bonilla-Escobar et al., 2017; Hernández-Holguín, 2022; Martínez Chaparro et al, 2020). Igualmente, las comunidades suelen facilitarse refugio (Tobar et al., 2019) y acceso a recursos como electricidad, alimento u oportunidades laborales (Ramírez Zuluaga, 2021; Tobar et al., 2019; Zamora-Moncayo et al., 2021).

Otro tipo de estrategias está en la lucha por los derechos, acciones de movilización y resistencia social, que generan sentimientos de fortalecimiento y empoderamiento (Bello-Tocancipá y Aranguren-Romero, 2020; Ramírez-Zuluaga, 2021; Sarmiento-Marulanda et al., 2021; Tobar et al., 2019; Zamora-Moncayo et al., 2021), repercutiendo positivamente en la salud mental de las víctimas (Hernández-Holguín, 2022). Dentro de estas, se ha identificado la construcción conjunta de infraestructura, que fortalece el sentido de pertenencia y agencia territorial (Hernández-Holguín, 2022; Martínez Chaparro et al., 2020; Ramírez-Zuluaga, 2021) y la resignificación de espacios antiguamente permeados por la violencia, que promueven retomar prácticas colectivas previas, y aumentar la esperanza frente al futuro (Ramírez-Zuluaga, 2021).

Por otro lado, muchas comunidades recurren a estrategias relacionadas con la espiritualidad, siguiendo creencias ancestrales o tradiciones religiosas como el catolicismo (Bonilla-Escobar et al., 2017; Martínez Chaparro et al., 2020; Tobar et al., 2019; Zamora-Moncayo et al., 2021). De tal forma, se ha evidenciado que las creencias religiosas se relacionan con sentimientos de esperanza y protección (Tobar et al., 2019), al igual que aumentan el optimismo de los grupos al otorgarles una nueva percepción de las situaciones estresantes (Bonilla-Escobar et al., 2017; Martínez Chaparro et al., 2020).

Otro tipo de estrategias identificadas tienen que ver con recuperar costumbres previas al conflicto armado, como las festividades, la cocina, contar historias y realizar creaciones artísticas; todo lo que permite la reconstrucción de la tradición, el tejido social y la memoria colectiva (Bonilla-Escobar et al., 2017; Ramírez-Zuluaga, 2021). Específicamente, dentro de las manifestaciones artísticas se han encontrado actividades como la creación de murales (Ramírez-Zuluaga, 2021) o el teatro (Hernández-Holguín, 2022), que facilitan espacios emocionales y de memoria; al igual que el tejido, que permite resignificar experiencias negativas (Hernández-Holguín, 2022), elaborar emociones, incluso siendo útil en casos de depresión y ansiedad (Bello-Tocancipá y Araguren-Romero, 2020), y fortalecer vínculos de confianza y tejido social (Bello-Tocancipá y Aranguren-Romero, 2020; Ramírez-Zuluaga, 2021).

Se plantean algunas estrategias menos frecuentes, por ejemplo, la educación como medio para mejorar el autoconcepto de las mujeres (Zamora-Moncayo et al., 2020); la evitación del afrontamiento de las situaciones difíciles, esperando que estas se solucionen por sí mismas (Ramírez et al., 2016); o el ocultar los eventos negativos experimentados y evitar cualquier tipo de resistencia, lo que suele ser más común en víctimas de

desplazamiento y se relaciona con sentimientos de desesperanza (Martínez Chaparro et al., 2020).

Estrategias comunitarias de cuidado como prácticas culturales

Diversos grupos sociales en escenarios de violencia suelen desarrollar a nivel comunitario, estrategias de autocuidado que resultan efectivas para afrontar eventos victimizantes experimentados y contrarrestar de alguna manera sus consecuencias en la salud mental. No obstante, si bien la investigación al respecto es útil para delinear cuáles han sido estas estrategias y qué impactos han tenido sobre el bienestar psicosocial, esta se ha limitado a la descripción de acciones, costumbres y/o recursos de los diferentes grupos, sin establecer un mayor nivel de análisis respecto al funcionamiento de dichas acciones.

La presente investigación propone un enfoque desde el análisis cultural centrado en las prácticas culturales de cuidado en salud mental en tanto son comportamientos realizados por varios individuos que conforman un grupo social específico, siguen las particularidades del contexto cultural y son aprendidos y transmitidos socialmente. El concepto de prácticas culturales es utilizado por el análisis de la conducta en el trabajo con problemáticas sociales, reconociendo que en estas el comportamiento solo puede comprenderse completamente dentro de su contexto grupal (Cihon & Mattaini, 2020).

Específicamente, las prácticas culturales son macroconductas que se llevan a cabo en un grupo cultural específico, que son transmitidas social y generacionalmente, manteniéndose en el tiempo (Mattaini, 1996b). A su vez, este enfoque entiende que la cultura se define por las interacciones que suceden entre los miembros de un grupo, manteniéndose principalmente por procesos de refuerzo social (Mattaini, 2020), y puede estudiarse en un nivel familiar, social, organizacional, o comunitario (Cihon & Mattaini, 2020).

De esta manera, las prácticas culturales son acciones grupales inmersas en un entramado de relaciones, por lo que su análisis debe centrarse en develar el contexto en el que ocurren y las consecuencias que las mantienen (Cihon y Mattaini, 2020; Mattaini, 1995b). Al respecto, las prácticas culturales funcionan bajo los mismos principios y leyes que la conducta operante (Cihon y Mattaini, 2020), pero se mantienen en el tiempo por la acción de contingencias entrelazadas de refuerzo, que suelen ser de carácter social, teniendo productos agregados útiles para el grupo cultural en general (Mattaini, 1996a; 1996b; Mattaini, 2004).

Mattaini (1996b) plantea que las prácticas culturales tienen diferentes antecedentes, que implican el contexto anterior a la ocurrencia de las prácticas y determinan cómo ellas aparecerán (Figura 1). Se tienen las *ocasiones*, que hacen referencia al momento/persona/situación bajo la cual es altamente probable que un comportamiento determinado dé lugar a una consecuencia concreta. Además, los *antecedentes estructurales* se refieren a elementos del entorno físico, social y cultural y a características del individuo, que son relativamente invariables y pueden proporcionar los medios para que se presente el comportamiento. Las *operaciones de establecimiento* son condiciones o situaciones antecedentes que afectan de alguna forma la sensibilidad a una consecuencia lo que favorece la evocación del comportamiento asociado a dicha consecuencia, es decir, que afectan el carácter reforzante de una práctica y, se relacionan con la motivación que los sujetos tienen para realizar una conducta.

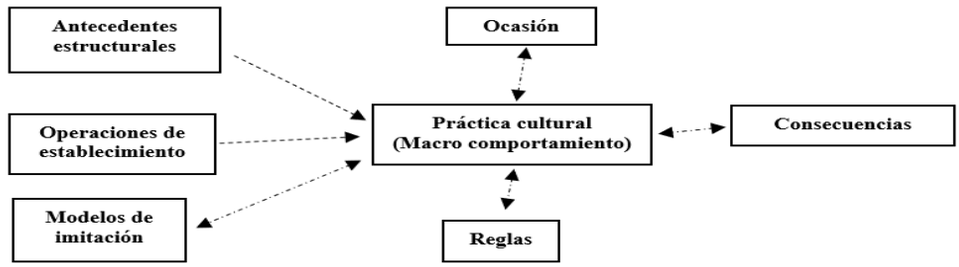
Los *modelos de imitación* son aquellos sujetos de quienes puede observarse el desarrollo de la práctica y la relación de esta con la obtención de consecuencias particulares. Por último, las *reglas* son descripciones verbales de contingencias, que implican el uso de lenguaje para describir el relacionamiento de dos o más eventos y resultan ser una guía sobre cómo las personas se comportan. Estas condiciones antecedentes se relacionan entre sí e influyen en la topografía de la conducta (Mattaini, 1996b). Las prácticas culturales pueden tener consecuencias, eventos que ocurren posterior a la realización de las macroconductas, y que afectan la posterior ocurrencia de los comportamientos; la

práctica cultural puede reforzarse lo que explicaría su mantenimiento en el tiempo, o castigarse y disminuir y/o dejar de presentarse (Mattaini, 1996b).

Existen propuestas teóricas que han dirigido la perspectiva de prácticas culturales hacia contextos centrados en violencia (Mattaini, 2001).

Figura 1

Componentes del diagrama de contingencias para las Prácticas Culturales



Nota. Traducido y adaptado de Mattaini (1995a).

En el ámbito local, también se ha retomado esta aproximación con el manejo de conflictos en población escolar (Ballesteros et al.,2009). Sin embargo, son escasos los reportes sobre su aplicación respecto del cuidado de la salud mental de víctimas en contextos de conflicto armado.

Entonces, teniendo en cuenta la importancia de ampliar la investigación psicológica sobre la salud mental en poblaciones en contexto de conflicto armado dando cabida a metodologías que permitan la construcción de conocimiento contextualizado (López et al., 2022), resulta relevante e innovador estudiar las prácticas culturales de cuidado de la salud mental en estas poblaciones, pues la comprensión de las contingencias dadas en dichas prácticas puede aportar a la planeación de acciones para fortalecerlas y transformarlas en pro de obtener mejores productos agregados para los grupos que las llevan a cabo (Cihon y Mattaini, 2020; Ramírez-Zuluaga, 2021).

Por lo anterior, se planteó como objetivo para este estudio el identificar y analizar prácticas culturales de cuidado de la salud mental y su relación con la construcción de paz en comunidades de los Montes de María.

Método

Se realizó un estudio cualitativo descriptivo (Colorafi & Evans, 2016), como parte del proyecto "Diseño Participativo de un Modelo de Atención Psicosocial en Salud Mental en las Comunidades de los Montes de María en el Marco de la Emergencia Sanitaria por Covid-19", desarrollado por la Pontificia Universidad Javeriana y la Universidad Tecnológica Bolívar con financiación del Ministerio de Ciencia, Tecnología e Innovación (Convocatoria No. 884 del 2020, Contrato 80740-866-2020), en articulación con la Universidad de Keele del Reino Unido.

Participantes

El estudio se realizó en los Montes de María, región incluida en el Programa de Desarrollo con Enfoque Territorial —PDET—, la cual está conformada por 15 municipios de los departamentos de Sucre y Bolívar, Colombia. Se contó con la participación de 140 líderes sociales.

De ellos, 70 procedían de Sucre y 70 de Bolívar; 87 se identificaron con el género femenino y 53 con el masculino. La mayoría de los participantes (100), estaba en un rango de edad entre 27 y 59 años, 23 eran mayores de 60 años y 16 estaban entre los 18 y 26 años, un participante no reportó su edad; es importante decir que hubo representación de

comunidades afrodescendientes, indígenas, campesinos, LGBTIQ+, jóvenes y mujeres.

Los líderes sociales en los Montes de María realizan acompañamiento a sus comunidades en situaciones difíciles en las que experimentan tensión y miedo; son muchas veces a quienes los miembros de sus comunidades acuden cuando están experimentando alguna dificultad (FUCUDE et al., 2020). Ellos promueven procesos de reconstrucción de la memoria histórica y el restablecimiento de derechos en la región (Grupo Regional de Memoria Histórica et al., 2017); así, al trabajar a diario en procesos de construcción de paz dentro de sus comunidades, tienen también contacto con estresores adicionales al estar cercanos a situaciones de riesgo para ellos mismos y sus familias (FUCUDE et al., 2020).

Procedimiento

Luego de un proceso de conversación y análisis entre los investigadores y representantes de la comunidad, se identificó la importancia del desarrollo del proyecto macro ya mencionado, el cual fue evaluado y aprobado por el Comité de Investigación y Ética de la Facultad de Psicología de la Pontificia Universidad Javeriana-Bogotá.

Se realizó un muestreo por conveniencia, por medio de una convocatoria a líderes sociales de los diferentes municipios de Montes de María. Durante 2021 se desarrollaron 22 grupos focales y un encuentro de validación/confirmación de resultados al que asistieron 37 participantes del grupo total. El equipo de investigadores dirigió los grupos focales, utilizando una guía flexible con preguntas orientadoras que permitieron a los participantes introducir nuevos temas.

Respecto del análisis de datos, la información fue grabada en audio digital y transcrita. Considerando un ejercicio de comparación constante de los datos, se identificó el momento en el que la recolección de información se debía detener, dada la saturación teórica (Straus y Corbin, 2002). Los datos se analizaron con el apoyo del software Nvivo 14®; la codificación fue realizada por dos psicólogas capacitadas en análisis de datos cualitativos; los investigadores (profesionales con formación y experiencia en psicología social, psicología clínica, salud pública y ciencias políticas), acompañaron y retroalimentaron el análisis en reuniones periódicas que fortalecieron un proceso colaborativo de forma transversal a la investigación.

El análisis se basó en las técnicas de la teoría fundamentada (Strauss y Corbin, 2002) y en la propuesta teórica de prácticas culturales de Mattaini (1996b). Se utilizaron diagramas de contingencia para representar las prácticas culturales y los elementos de conexión en ellas (Figura 1); estos diagramas constituyen una herramienta con la que es posible ilustrar de forma gráfica la complejidad de las relaciones contingenciales, al tiempo que facilita el reconocimiento de elementos y procesos simples que permiten su establecimiento (Mattaini, 1995a; 1996b). Se realizó una codificación abierta identificando categorías generales y subcategorías, y una codificación axial que permitió establecer relaciones entre categorías y subcategorías en el marco de un ejercicio de microanálisis (Straus y Corbin, 2002). Desde aquí se definieron las prácticas culturales de cuidado de la salud mental, y, con este insumo, se realizó una segunda fase de análisis de tipo deductivo retomando la propuesta teórica de prácticas culturales de Mattaini (1996b); así, se hizo una nueva codificación que permitió identificar desde la narrativa de los participantes los diferentes componentes del modelo.

Se realizó un proceso de confirmación de los resultados preliminares con los participantes (Creswell, 1998). Para esto, se les hizo una presentación utilizando diagramas de contingencia (Mattini, 1995a) (Figura 1) como herramienta para ilustrar los componentes de las prácticas y sus relaciones, teniendo en cuenta su retroalimentación, se complementó el análisis afinando el apartado de resultados.

Resultados

Se identificaron tres prácticas culturales principales en relación con el cuidado de la salud mental

en las comunidades de Los Montes de María: 1) Reunirse con familiares, amigos, líderes y otros miembros de las comunidades, 2) plantear metas de valor y realizar acciones para alcanzarlas y 3) desarrollar actividades artísticas o artesanales. Vale resaltar que las comunidades no privilegiaron una práctica cultural sobre las otras.

A continuación, se presentan los componentes de cada práctica, y sus relaciones con la construcción de paz.

Reunirse con familiares, amigos, líderes y otros miembros de las comunidades

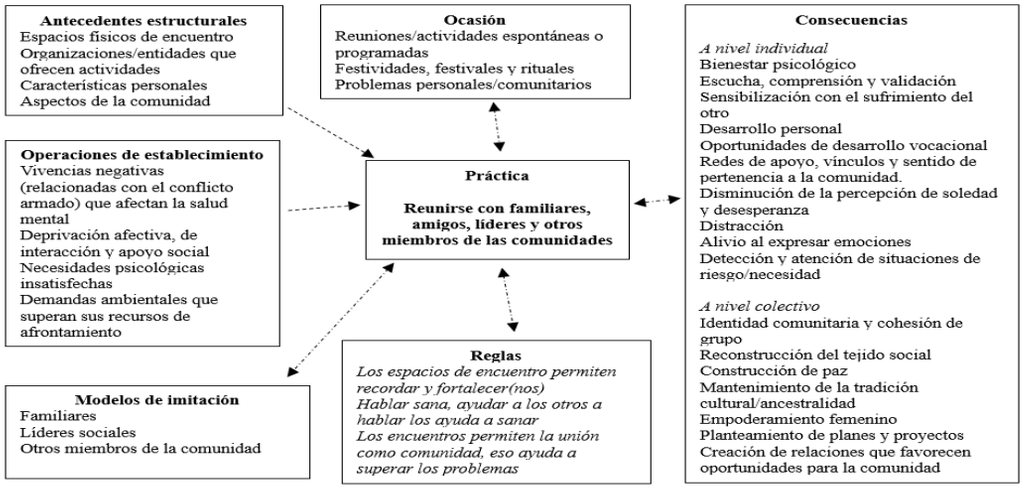
Se trata de encuentros en los que comparten tiempo, experiencias, objetos materiales valiosos para ellos como la comida y las artesanías. Es frecuente que allí conversen sobre temas personales y/o situaciones relevantes para el territorio. Se trata de escenarios en los que suelen brindar/recibir compañía y apoyo. También participan en actividades de capacitación/aprendizaje, esparcimiento (deporte, arte, etc.), trabajo comunitario y/o de celebraciones (Figura 2). Para mayor profundización y ejemplos sobre los componentes de esta práctica ver Apéndice A.

Los antecedentes estructurales identificados son: lugares cercanos y de fácil acceso en los que se realizan los encuentros (canchas deportivas, plazas, tiendas, terrazas, espacios privados como las viviendas). Hay actividades como charlas, talleres o eventos especiales que se ofrecen a la comunidad desde organizaciones de base (Fundación Red Montemariana) e internacionales (Organización de las Naciones Unidas [ONU]), así como entidades estatales (Servicio Nacional de Aprendizaje [SENA]); características personales que favorecen la realización de la práctica (como la empatía y las habilidades sociales) y aspectos comunitarios relacionados con tradiciones culturales y religiosas (véase Apéndice A).

Las ocasiones incluyen: reuniones con la familia, amigos, comunidad u organizaciones (cursos/talleres/charlas, reuniones de gestión de territorios y de organización comunitaria); festividades (fiestas religiosas), festivales (carnavales regionales) y rituales (velorios y novenarios); así como problemáticas y/o la identificación de necesidades en salud mental propias o de otros.

Figura 2

Práctica: Reunirse con familiares, amigos, líderes y otros miembros de las comunidades. Diagrama de contingencias



Nota. Elaboración propia.

Dentro de las operaciones de establecimiento están las experiencias relacionadas con el conflicto armado, que les resultan traumáticas dado su carácter victimizante; carencias y necesidades en lo social y afectivo que guardan relación con las implicaciones del conflicto armado y del Covid-19; y una brecha entre las demandas ambientales y la capacidad de la persona para enfrentarlas, por ejemplo, las constantes situaciones de riesgo.

Los principales modelos de imitación son: familiares que de forma intergeneracional han dado importancia a compartir/conversar con la comunidad, participando en espacios de encuentro social; miembros de las comunidades (vecinos, amigos, compañeros) que han modelado acciones de apoyo social y líderes sociales que, al ejecutar su rol y cumplir los compromisos con las poblaciones, se constituyen en modelos a seguir.

Se identificaron algunas reglas que describen una relación antecedentes-conducta (si se ha sobrevivido a tanta violencia, se debe seguir adelante juntos) y otras con eje en la relación conducta-consecuencia (el abrazo montemariano —que se da en los encuentros entre quienes se conocen— es tan fraternal, que produce alegría —por encontrarse con el otro—).

Mientras unas reglas se centran en el efecto sanador y fortalecedor de reunirse con familiares, amigos, líderes y otros miembros de la comunidad, otras resaltan que esta práctica favorece el afrontamiento de dificultades personales, familiares y/o comunitarias (ver Figura 2 y Apéndice A para ampliar reglas identificadas).

Dentro de las consecuencias de la práctica hay algunas a nivel individual y dentro de ellas, varias son positivas, esto podría explicar el mantenimiento de la práctica por procesos de reforzamiento positivo. Las principales son: el bienestar psicológico, que relacionan con disfrute, alegría, esperanza, satisfacción, percepción de libertad, tranquilidad y seguridad; la escucha, comprensión, valoración, acogida, validación y sensibilización con el sufrimiento del otro; el desarrollo personal y vocacional, incluyendo intercambio de saberes/ampliación de conocimiento, fortalecimiento de competencias/habilidades psicoemocionales y/o relacionales por ejemplo, de regulación emocional o solución de problemas entre otros; y fortalecimiento de redes de apoyo.

También se identificaron consecuencias que implicaban el retiro o alejamiento de estímulos aversivos, por ejemplo, la disminución de la percepción de soledad y desesperanza, distraerse de emociones/pensamientos que le son molestos; sentir alivio al permitirse la expresión de emociones; y el abordaje de situaciones de riesgo/necesidad.

Además, se evidenciaron consecuencias colectivas que corresponden con un nivel cultural (ver Figura 2); consecuencias como los procesos de reconstrucción de la memoria histórica, los acercamientos a la verdad y la reparación colectiva constituyen avances en la lucha/búsqueda de construcción de paz en la comunidad (ver Apéndice A, sección Avances en construcción de paz).

Según lo reportado por los líderes, esta práctica centrada en el reunirse se da con la participación de mujeres y hombres; sin embargo, se evidenciaron particularidades en dichos encuentros cuando se dan con participación exclusiva de mujeres; allí, las ocasiones incluyen problemas vivenciados por ellas y asociados con el género; como operación de establecimiento se identifica alguna experiencia de violencia de género y dentro de las consecuencias, es de resaltar el empoderamiento femenino que conecta con el fortalecimiento de la sororidad.

Es importante decir que los jóvenes suelen realizar encuentros en los que sus conversaciones se centran en temas personales sobre apoyo emocional. Dentro de las ocasiones para ello se señala una que resulta relevante y tiene que ver con problemáticas de salud mental en coetáneos (riesgo de suicidio, de consumo de sustancias psicoactivas o un inadecuado uso de las redes sociales).

Plantear metas de valor y realizar acciones para alcanzarlas

En esta práctica cultural las metas se orientan hacia el bienestar y desarrollo individual, familiar

y comunitario e incluyen satisfacción y sentido de vida; condiciones adecuadas que favorezcan la calidad de vida (salud, economía, etc.); formación académica cuyos frutos retornen a la comunidad; identidad colectiva (fortalecimiento y protección de la tradición cultural y la ancestralidad); reconstrucción del tejido social; construcción de paz (justicia transicional, reparación, no repetición y reconstrucción de memoria histórica, etc.).

Dentro de las acciones que realizan para alcanzar las metas están: comportamientos caracterizados por la empatía, solidaridad y cooperación entre los miembros de la comunidad; cuidar a su familia y tener autocuidado en salud; participar en espacios de capacitación/educación retornando lo aprendido a su comunidad; recordar, replicar y enseñar costumbres y tradiciones culturales/ancestrales. Además, se identifican acciones de liderazgo y gestión de proyectos, espacios y/o procesos de incidencia comunitaria; desarrollar proyectos productivos, realizar acciones de protección del medio ambiente, desarrollar acciones que visibilicen la lucha social y buscar garantías para la paz (Figura 3). Para mayor profundización y ejemplos sobre los componentes de esta práctica ver Apéndice B.

Entre los antecedentes estructurales están: un contexto actual e histórico permeado por el conflicto armado y sus efectos; situación de pobreza socioeconómica; necesidades territoriales relacionadas con el acceso a la educación, salud, escasa oportunidad de trabajo bien remunerado, entre otros. También, un marco legal nacional que cobija la atención diferencial a comunidades y víctimas, la protección de sus derechos, y garantías para la exigencia ciudadana y reparación; el acuerdo de paz que plantea garantías respecto de procesos de verdad, justicia y reparación, pero que presenta dificultades/ incumplimientos en su implementación. De igual forma, la acción de organizaciones de base (OPD Montes de María), internacionales (ONU) y entidades estatales (SENA) que ofrecen actividades a la comunidad con escenarios de capacitación, incentivos y acompañamiento en los procesos de liderazgo social (véase Apéndice B).

Asimismo, se identifican características personales como resiliencia, autoeficacia, capacidad de adaptación, capacidad de liderazgo, acerbo de conocimiento sociocultural, sentido social y de pertenencia a la comunidad, cultura y/o etnia.

Las ocasiones asociadas con esta práctica son: circunstancias del ciclo vital como la elección vocacional, la enfermedad/muerte de personas significativas o el nacimiento de un hijo); también, situaciones que demandan encontrar soluciones o afrontar un problema como eventos de crisis emocional, necesidad económica, problemáticas sociales o personales.

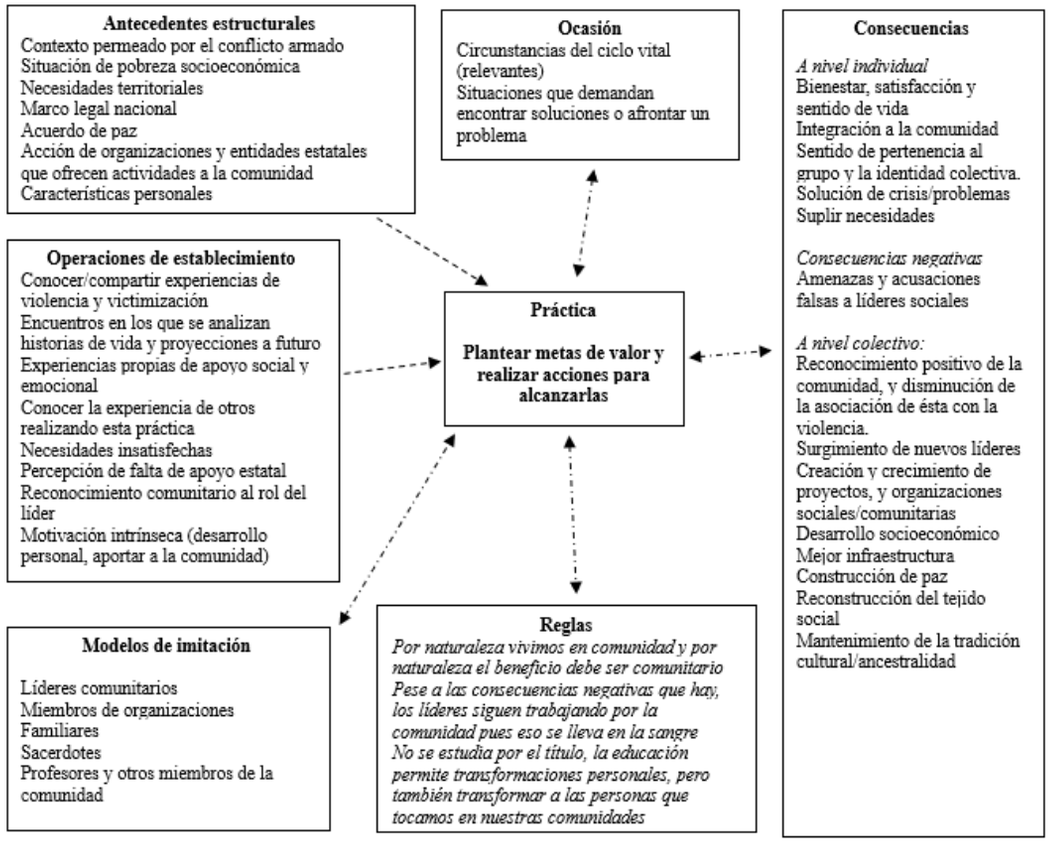
Hay operaciones de establecimiento como: conocer/compartir experiencias de violencia y victimización en contexto de conflicto armado, que implicaron pérdidas significativas en diferentes niveles (desplazamiento forzado, ruptura del tejido social, pérdida de seres queridos, de recursos económicos y de la cotidianidad); encuentros familiares, de amigos, comunitarios y/o de trabajo, donde abordan historias de vida y proyecciones a futuro (Figura 3).

Los principales modelos de imitación son los miembros de organizaciones con experiencias previas de éxito y/o aprendizajes relacionados con metas individuales y comunitarias; líderes sociales; y familiares, reconociendo que muchos padres y abuelos de líderes lo habían sido previamente, evidenciando enseñanza intergeneracional. Otros modelos importantes han sido sacerdotes que llevaron a cabo acciones de cooperación para el beneficio de las comunidades, profesores u otros miembros de la comunidad que han conseguido desarrollo socioeconómico para sí mismos y/o sus comunidades.

Reglas como: *si se tiene sentido social, se puede trabajar en comunidad pese a los malos momentos*, ilustran la relación antecedentes-conducta; mientras que la relación conducta-consecuencia se evidencia en reglas como: *a las personas montemarianas les gusta trabajar por su territorio y que su comunidad esté bien*.

Figura 3

Práctica: Plantear metas de valor y realizar acciones para alcanzarlas. Diagrama de contingencias



Nota. Elaboración propia.

Se identifican reglas centradas en la búsqueda del beneficio comunitario; otras que señalan tanto la labor que debe seguir el líder social, como la importancia de la unión comunitaria; otras reglas se relacionan con el valor de la educación en dirección al sentido personal y también a la comunidad (Figura 3 y Apéndice B para ampliar reglas identificadas). Las consecuencias individuales de tipo positivo incluyen: la experiencia de bienestar, satisfacción y sentido de vida; se evidencia refuerzo social al trabajar en pro de las metas, particularmente en el rol del líder; esto, ya que hay una valoración positiva y reconocimiento de los procesos de liderazgo por parte de la comunidad.

La práctica favorece la integración a la comunidad, el fortalecimiento del sentido de pertenencia al grupo y la identidad colectiva. También se identificaron consecuencias que podrían mantener la conducta por procesos de reforzamiento negativo, por ejemplo, la solución de crisis/problemas y la suplencia de necesidades. No obstante, debe resaltarse que se identificó una consecuencia negativa para los involucrados en procesos de liderazgo social, al ser objeto de amenazas y acusaciones falsas en relación con su trabajo.

Hay diferentes consecuencias a nivel colectivo (Figura 3); una de las priorizadas por los participantes es que su comunidad tenga reconocimiento interno y externo por aspectos positivos (y se disminuya el relacionamiento con roles negativos asociados con conflicto armado y violencia). Por otra parte, la práctica favorece la reconstrucción de la memoria histórica, la reparación colectiva, el esclarecimiento de la verdad y la reconstrucción

del tejido social, todo esto viabiliza los procesos de construcción de paz (Apéndice B, sección Avances en construcción de paz).

De manera particular, en las mujeres se identificaron metas orientadas a enfrentar las violencias de género y lograr un enfoque diferencial en la protección de sus derechos, para esto realizaban acciones como la formación de colectivos femeninos con dicho propósito. En los hombres se resaltan las metas relacionadas con generación de proyectos productivos de agricultura. Tanto en hombres como mujeres la práctica derivaba en consecuencias positivas individuales y comunitarias.

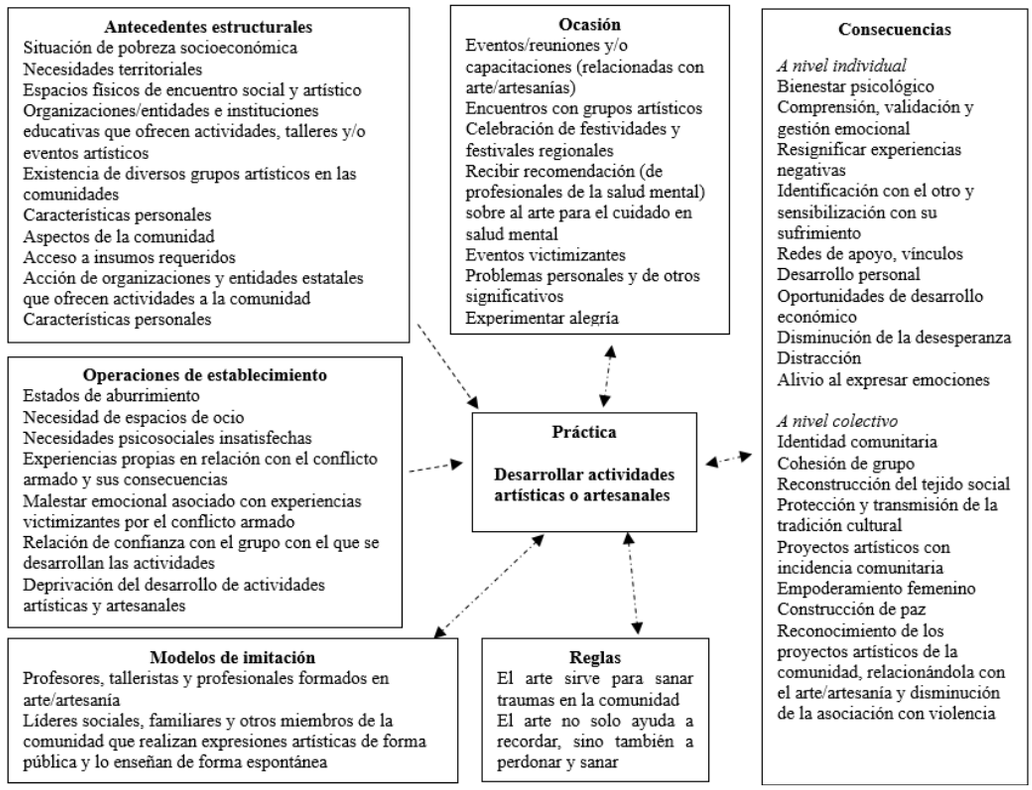
Las metas en los jóvenes se relacionan con bienestar, oportunidades de desarrollo académico y laboral, creando grupos juveniles que abogan por sus derechos, lo que implica el sentido de pertenencia a los grupos con ideales compartidos y el surgimiento de líderes jóvenes con participación política.

Desarrollar actividades artísticas o artesanales

Esta práctica cultural implica el desarrollo de actividades artísticas/artesanales ya sea en solitario o de forma grupal, pero siempre en espacios de confianza. Incluye: coser, tejer, construir sábanas de sueños, accesorios y diversas artesanías; escuchar y/o componer música, tocar instrumentos musicales como la gaita y los tambores, cantar y/o componer canciones; dibujar, colorear y pintar; escribir poemas; realizar productos audiovisuales como documentales y videos; o bailar diferentes ritmos/géneros, especialmente los típicos (Figura 4). Si bien, la comunidad en general se involucra en estas actividades, las artesanías y tejidos suelen ser realizados principalmente por mujeres. Para mayor profundización y ejemplos sobre los componentes de esta práctica véase Apéndice C.

Figura 4

Práctica: Desarrollar actividades artísticas o artesanales. Diagrama de contingencias



Nota. Elaboración propia.

En esta práctica hay diversos antecedentes estructurales (Figura 4). Se resaltan la pobreza socioeconómica; la existencia de espacios públicos y privados en los que se realizan encuentros sociales y manifestaciones artísticas/artesanales; el acceso a los insumos requeridos como los instrumentos musicales, el material textil, entre otros, y la existencia de grupos artísticos en las comunidades (de gaitas y tambores, baile, banda marcial, etc.). También algunas características personales como habilidades para el trabajo manual, la música y el baile y/o la disposición para aprender; asimismo, aspectos de la comunidad relacionados con sus tradiciones culturales y la importancia que tiene para ellos el "compartir" y el arte.

Las ocasiones para esta práctica son: la divulgación, invitación y/o asistencia a eventos/talleres/reuniones o actividades de capacitación/aprendizaje en temas de arte/artesanías promovidas y/o realizadas por organizaciones/instituciones; encuentros con grupos artísticos; celebración de festividades y festivales regionales (carnavales, fiestas patronales, inauguración de eventos comunitarios). Recibir recomendación de profesionales de la salud mental sobre el arte y sus beneficios en salud mental; eventos victimizantes, problemas personales (emocionales, relacionales) y de otros significativos, y/o, momentos de alegría.

Las operaciones de establecimiento para esta práctica son: la presencia de estados de aburrimiento, el deseo/necesidad por involucrarse en espacios de ocio; tener necesidades psicosociales insatisfechas (expresión emocional, expresión y validación emocional, salud, educación, economía, etc.); contextos de silenciamiento e invalidación emocional; experiencias propias en relación con el conflicto armado; estados de preocupación y respuestas emocionales asociadas con experiencias victimizantes relacionadas con el conflicto armado. Se resalta también la confianza establecida con los miembros del grupo en el que se desarrollan las actividades; y, además, hubo situaciones de deprivación de espacios artísticos, asociadas con el contexto del conflicto armado y las restricciones derivadas de la pandemia por Covid-19.

Dentro de los modelos de imitación están distintas personas con formación y/o experiencia en lo artístico/artesanal. Se evidencian reglas que reflejan la conexión antecedentes-conducta (si hay espacios para el arte, la gente participará), mientras otras muestran la conexión conducta-consecuencia (Bailar trae alegría). Las reglas asociadas con esta práctica resaltan el papel del arte como elemento terapéutico y sanador, útil para afrontar los problemas, preocupaciones y duelos. Otras reglas abordan la importancia de resignificar eventos victimizantes y otras experiencias dolorosas vividas, siendo el arte una forma para lograrlo (Figura 4 y Apéndice C para ampliar reglas identificadas)

El desarrollo de actividades artísticas y artesanales tiene consecuencias a nivel individual que son positivas para las personas e incluyen el bienestar psicológico (relacionado con disfrute, alegría, tranquilidad); la comprensión, validación y gestión emocional (asociado con pérdidas experimentadas), lo que permite asimilar, reescribir o resignificar las experiencias negativas. Además, se alcanza identificación con el otro y sensibilización con su sufrimiento; se facilita el desarrollo de vínculos significativos y redes de apoyo; se favorece el desarrollo personal y se abren oportunidades de desarrollo económico al recibir ingresos por la venta de sus productos.

También hay consecuencias como la disminución de la desesperanza, la distracción de eventos que les causan malestar y el sentir alivio al permitirse la expresión de emociones; aumentando con ello la probabilidad de ocurrencia de la práctica.

A nivel colectivo la práctica tiene consecuencias como: desarrollo y fortalecimiento de la identidad comunitaria, posibilidad de cohesión de grupo; avances en la reconstrucción del tejido social, y protección y transmisión de la tradición cultural. Otras consecuencias son la formulación y desarrollo de proyectos artísticos con incidencia comunitaria, como la creación de organizaciones/colectivos y la denuncia social. Al respecto, el

desarrollo de actividades artísticas/artesanales en grupos de mujeres, ha fortalecido el empoderamiento y la sororidad.

En general, se evidencian efectos positivos respecto de la construcción de paz, sirviendo como medio para la sanación, la reparación colectiva, la reconstrucción de la memoria histórica, lo que favorece el perdón y la reconciliación social. Además, para la comunidad de Los Montes de María tiene gran valor el reconocimiento interno y externo de sus proyectos artísticos, lo cual implica que se relacione la región con arte/artesanías (como en el caso de las tejedoras de Mampuján) y se disminuya la asociación con la violencia y roles negativos respecto del conflicto armado.

Discusión y conclusiones

La investigación identificó y analizó prácticas culturales de cuidado de la salud mental y su relación con la construcción de paz en comunidades de los Montes de María. Se evidenciaron tres prácticas: 1) Reunirse con familiares, amigos, vecinos, miembros de organizaciones y de la comunidad en general; 2) plantear metas de valor individuales y comunitarias, y actuar para alcanzarlas; y 3) desarrollar actividades artísticas o artesanales a nivel individual y grupal. En cada una se observan relaciones entre sus componentes intra-práctica, pero también aspectos transversales y posibles conexiones entre prácticas.

Hay una conexión importante entre las tres prácticas. En principio, *reunirse con familiares, amigos, vecinos, miembros de organizaciones y de la comunidad en general* tiene como consecuencias la sensibilización con el sufrimiento del otro, la integración a la comunidad y el fortalecimiento de identidad comunitaria; estos constituyen antecedentes de la práctica *plantear metas de valor individuales y comunitarias, y actuar para alcanzarla*s. Así, los encuentros sociales posibilitarían el trabajo común dirigido a metas valiosas. Ahora, dentro de las metas de valor referidas en la segunda práctica, se incluían el bienestar, el desarrollo personal y comunitario, así como la identidad colectiva; vale decir que la tercera práctica tenía como consecuencia el alcance de dichas metas, es decir, el *desarrollar actividades artísticas o artesanales* se convierte en una acción que les permite alcanzar metas propuestas. Se evidencia entonces que el análisis del entramado contingencial entre prácticas culturales puede favorecer el reconocimiento de factores que inciden en el desarrollo y la continuidad de estos macrocomportamientos, pues una práctica cultural puede servir como motivadora de otras (Todorov y Freitas Lemos, 2020; Mattaini 1996b).

Respecto de los aspectos transversales a las tres prácticas, se evidenciaron consecuencias en su mayoría positivas a nivel individual y colectivo, lo cual corresponde con investigaciones previas sobre prácticas culturales en las que también se diferencian los tipos de consecuencias, nominándolos respecto de lo operante y lo cultural (Ballesteros et al., 2009; Novoa-Gómez et al., 2011; Pulido-Castelblanco et al., 2013). Los resultados particulares de la presente investigación permiten observar que las prácticas de cuidado de salud mental tuvieron consecuencias con implicaciones en ámbitos como el emocional, social/relacional y económico, propiciando el desarrollo personal y comunitario que incluye la construcción de paz.

A continuación, se presenta un mayor análisis de algunos aspectos relevantes en cada práctica. Algunas de las consecuencias a nivel individual de la práctica *reunirse con familiares, amigos, líderes y otros miembros de las comunidades,* implican experiencias de estados emocionales agradables, evitación/escape de emociones que asocian con malestar; afrontamiento, expresión y validación emocional, fortalecer redes de apoyo y lograr desarrollo personal. Lo anterior, es consistente con lo reportado en investigación social, respecto de cómo los encuentros comunitarios se relacionan con el bienestar psicológico y social (Cardozo et al., 2017) y resultan un ejercicio válido para la recuperación emocional (Arias López, 2019).. En ellos, se fomenta una noción de acompañamiento y cercanía, lo que facilita la expresión de emociones

y pensamientos (Chaparro et al., 2020; Perdomo et al., 2021), generando vínculos de confianza y la constitución de redes de apoyo (Bello-Tocancipá & Aranguren-Romero, 2020; Chaparro et al., 2020; Quintero-Jurado & Ossa-Henao, 2018; Vera-Márquez et al., 2015; Zamora-Moncayo et al., 2021). Los encuentros permiten nombrar y compartir socialmente los estados emocionales, con retroalimentaciones comprensivas y empáticas de personas que vivieron experiencias similares (Bonilla-Escobar et al., 2017), esto posibilita una nueva perspectiva de las vivencias desde el agenciamiento (Chaparro et al., 2020). Además, se ha reportado que las relaciones sociales positivas y la realización de actividades en conjunto permite la distracción, el desarrollo de habilidades, favorece valoraciones propias de satisfacción, impactando positivamente la salud mental (Benatuil & Toscano, 2017; Quintero-Jurado & Ossa -Henao, 2018).

Lo anterior está alineado con hallazgos de estudios cuantitativos previos que han abordado el afrontamiento efectivo en comunidades afectadas por el conflicto armado en Colombia. En particular, Cerquera-Córdoba et al. (2020) encontraron que una de las principales estrategias de afrontamiento en estas poblaciones era la búsqueda de apoyo social. Al respecto, Ortegón, et al. (2022) identificaron que esta estrategia se relaciona con resiliencia, sentimientos de confianza, bienestar y seguridad, reconociendo que el apoyo social permite amortiguar los efectos negativos del conflicto armado y recomponer el tejido social de las comunidades.

La práctica *plantear metas de valor y realizar acciones para alcanzarlas* tiene un enfoque de asociación comunitaria y agencia social, las consecuencias identificadas estaban en relación con la integración social, el sentido de pertenencia al grupo, la identidad colectiva y la solución de problemas, sin dejar de lado el bienestar personal, el cual, se veía retroalimentado con los logros comunitarios alcanzando metas comunes con el trabajo realizado; llama la atención que esto por sí mismo le da sentido a sus vidas. Al respecto, los estudios resaltan que la organización colectiva es una herramienta para el afrontamiento emocional que permite cambios sociales relacionados con el bienestar psicosocial (Hernández-Holguín, 2022); se ha planteado que las comunidades victimizadas/marginalizadas se organizan y generan procesos de resistencia y visibilización que, a su vez, tienen impactos positivos para la salud mental, el bienestar personal y social (Arias López, 2019; Hernández-Holguín, 2022; Martínez Chaparro et al., 2020; Tobar et al., 2019). El trabajo hacia metas comunitarias es un mecanismo de transformación social; al alcanzar las metas y direccionar las relaciones sociales en lazos de solidaridad y apoyo social, se favorece el fortalecimiento de identidades colectivas (Brennan, 2023; Martínez Chaparro et al., 2020). Cuando las personas que han padecido eventos victimizantes desarrollan un sentido de agencia, se favorecen la percepción de control y los procesos de recuperación/reparación (Campbell & Burgess, 2012; Tobar et al., 2019); se aumenta la confianza y resiliencia comunitaria (Brennan, 2023; Perdomo et al., 2021); así como el bienestar psicológico y el capital social (Cardozo et al., 2017).

La práctica de definir metas y realizar acciones hacia ellas presentó consecuencias relacionadas con el afrontamiento, la integración social, la solución de problemas y necesidades, la satisfacción, el sentido de vida, y el bienestar individual y social. Al respecto, los enfoques clínicos comportamentales de tercera generación indican la importancia de clarificar las metas en direcciones valiosas para cada uno y actuar en pro de dicha dirección (Hayes et al., 2004; Wilson & Soriano, 2014); esto, permite a las personas visualizar un futuro, trabajar hacia él, disfrutar y valorar no solo la meta sino el camino que hacia ella (Assaz et al., 2023; Cairns et al., 2019). Los participantes, desde la memoria colectiva construida, caminan reconociendo su historia, pero reescribiendo el camino conjunto que quieren llevar; así, en su historia se entrecruzan antecedentes como el contexto permeado por el conflicto armado y las experiencias comunes que comparten en sus encuentros. Actuar con el propósito de alcanzar sus metas se relaciona

con un incremento en la flexibilidad psicológica, el afrontamiento de condiciones clínicas y la reducción de síntomas emocionales (Bai et al., 2020; Fledderus et al., 2021; Gibson et al., 2023; Moxham et al., 2017; Na et al., 2022; Thompson et al., 2021; Wilson & Soriano, 2014).

Para muchos participantes, el planear metas y actuar en pro de ellas desde la comunidad refleja parte de su rol como líder social. De esta manera, las consecuencias mencionadas sumadas al reconocimiento que tienen por su labor y los efectos directos que la práctica misma tiene también en lo colectivo, pueden relacionarse con que el liderazgo social se mantenga presente pese a que también les trae consecuencias negativas como el recibir amenazas o ser calumniados; sin embargo, identificar estas consecuencias es un llamado de alerta respecto de un posible peligro frente al desarrollo de la práctica en sí.

La práctica *desarrollar actividades artísticas o artesanales* presenta consecuencias respecto de la expresión emocional, reelaboración de experiencias difíciles y desarrollo de habilidades prosociales; además de fomentar la identidad, vínculos y apoyo sociales. Esto concuerda con que el arte propicia la reflexión sobre experiencias vividas en el pasado y sus consecuencias en la vida propia, favorece la comprensión emocional (Clift, 2012) y ofrece mecanismos para exteriorizar eventos adversos (Bonilla-Escobar et al., 2017); esto se relaciona con reglas mencionadas en esta práctica respecto de que la función del arte en sus vidas incluía recordar, visibilizar, perdonar y sanar; y que algunas expresiones artísticas repetitivas y reflexivas permiten el dolor y la rabia. Con el arte se reelabora el pasado individual y social (Hernández-Holguin, 2022) y al realizarse en grupo, permite la consolidación de espacios de confianza que posibilitan el compartir experiencias, intereses y preocupaciones (Ramos, 2013), fortalece el apoyo social solidario (Bang & Wajnerman, 2010; Hernández-Holguin, 2022), genera proyectos comunes y visiones de un futuro compartido (Ramírez, 2021) y facilita procesos de adaptación (Bang, 2015). Esto afianza la relación entre lo artístico/artesanal y algunos aspectos señalados como eje en la práctica relacionada con la planeación de metas de valor en lo individual y comunitario.

Las prácticas culturales siguen la lógica metacontingencial en la que, al estar constituidas por un entramado de diferentes contingencias (entre antecedentes, macroconductas, y consecuencias), generan productos agregados que son retroalimentados por un ambiente selector (Mattaini, 1996b). Al respecto, las comunidades de los Montes de María tienen diferentes prácticas de cuidado de la salud mental, que, además de su efecto en salud mental, tienen productos agregados con efectos más amplios respecto de: 1) el desarrollo socioeconómico en el territorio, 2) el reconocimiento de la comunidad por aspectos positivos como el arte y la disminución del estigma en relación con el conflicto armado y 3) la construcción de paz; esto, en clave de reconstrucción de la memoria histórica, del tejido social, acercamientos a la verdad y reparación colectiva.

Enfatizando en la relación entre prácticas de cuidado de la salud mental y construcción de paz, es válido retomar a Ramírez Zuluaga (2021), quien indica que "la intención de restituir, reproducir y regenerar prácticas colectivas cotidianas se ha convertido en el hilo y aguja con que la vida en comunidad se teje, se repara, se reanima y se abre a nuevos devenires" (p.91); así, el tejido social y el sentido de identidad se conforman por diferentes niveles de interacción social relacionados entre sí, e implican un trabajo de articulación de diferentes actores (Espínola Verdín & Guzmán Gómez, 2018); esto resuena con el papel de la unión montemariana en la consecución de beneficios comunitarios que incluyen, pero trascienden lo individual. Además, la reconstrucción del tejido social y la identidad colectiva se han evidenciado como factores relevantes para el cuidado de la salud mental (Puerta Henao, 2015), demostrando una relación bidireccional entre estos aspectos sociales/estructurales y la salud mental; los análisis presentados resaltan esta relación, al mostrar la pobreza, las necesidades estructurales y las experiencias relacionadas con

un conflicto armado (que sigue presente) dentro de los antecedentes estructurales y las operaciones de establecimiento de las prácticas.

Las afectaciones en salud mental de personas en contextos de conflicto armado no son hechos aislados, se encuentran relacionados con estresores diarios y dificultades relacionadas al posconflicto, y en consecuencia deben intervenirse incluyendo los diversos factores explicativos (Rokhideh, 2017; UNDP, 2022). La guerra trae efectos negativos en la salud mental de quienes la viven, evidenciándose en el riesgo de desarrollar diversas dificultades psicológicas que, cuando no son atendidas, pueden generar efectos negativos a largo plazo en el bienestar individual y colectivo (UNDP, 2022; IASC, 2024). A su vez, estas problemáticas pueden tener efectos desestabilizantes en la sociedad, promoviendo comportamientos anti-sociales (UNDP, 2022), que son riesgosos en tanto los territorios en posconflicto son susceptibles de experimentar nuevas formas de violencia (Rokhideh, 2017). Las prácticas identificadas en el presente estudio que de una u otra forma derivan en avances para la construcción de paz evidencian los esfuerzos que individual y comunitariamente se realizan para construir una realidad diferente; no es posible pensar en una paz duradera si no se manejan los impactos del conflicto armado en salud mental, los cuales pueden contribuir a ciclos de violencia intergeneracionales evidenciados en narrativas de victimización y trauma intergeneracional lo que puede cultivar un deseo de venganza y continuación de la guerra (IASC, 2024).

Así como se resaltan los efectos negativos del conflicto armado en la salud mental, vale la pena exaltar el papel que las prácticas de cuidado de la salud mental tienen respecto de la disposición hacia componentes de construcción de paz:

> Logramos, así integramos en conjunto, sanar los duelos y todos los traumas que nos dejó pues esta experiencia amarga de desplazamiento, pudimos perdonar a los victimarios, pudimos sanar las heridas lo que no quiere decir que se nos olvidó, no se nos ha olvidado, pero recordamos sin dolor y sin rabia, pudimos perdonar porque entendimos que cuando perdonamos, somos libres. (Líder social, Montes de María)

Estudios previos documentan la conexión entre las prácticas comunitarias de afrontamiento y la construcción de paz, destacando que no solo promueven la resiliencia y el bienestar individual, sino que tienen un papel crucial en la reconstrucción del tejido social y en la creación de condiciones propicias para la paz sostenible. Se plantea que las prácticas comunitarias de apoyo mutuo, la participación en actividades culturales y la organización colectiva para la defensa de derechos son esenciales para fortalecer la cohesión social y restaurar la confianza entre los miembros de la comunidad, lo cual es fundamental para la construcción de paz (Bonilla-Escobar et al., 2017; Ramírez Zuluaga, 2021). Además, estudios como el de Hernández-Holguín (2022) muestran que prácticas de resistencia cultural, como la preservación de tradiciones y la realización de proyectos artísticos actúan como mecanismos de resistencia frente a la violencia y la opresión, facilitando la reconstrucción de la memoria histórica y el fortalecimiento de la identidad comunitaria. Los esfuerzos por integrar la construcción de paz, el acompañamiento psicosocial y en salud mental, buscan fortalecer el tejido social, mejorar el bienestar y lograr una paz duradera (Sliep et al., 2023). Integrar la construcción de paz con el apoyo a la salud mental tiene mejores resultados que cuando se usan enfoques aislados, permite mejorar la cohesión social, la relación consigo mismos y con otros, la resiliencia, el bienestar, y reduce daños no intencionados y estigma (IASC, 2024; UNDP, 2022). Al respecto, los resultados evidencian una profunda relación entre salud mental y paz en los Montes de María, en la que las prácticas culturales de cuidado de la salud mental han emergido y se mantienen en un contexto de conflicto armado; la continuidad en el tiempo de estas prácticas logra efectos acumulativos de avances en la construcción de paz y a su vez, en la salud mental comunitaria.

Esto otorga una respuesta a los esfuerzos por juntar los procesos de atención psicosocial y de la salud mental con la construcción de paz (IASC, 2024), e invita a centrar la mirada en los mismos macrocomportamientos comunitarios.

De esta forma, las prácticas culturales de cuidado de salud mental de las comunidades de Los Montes de María tienen importantes efectos favorables para la salud mental, con impacto individual y colectivo respecto de lo emocional, social/relacional, socioeconómico y cultural de las poblaciones. Esto reafirma la importancia de entender la salud mental desde una perspectiva amplia e integradora que va más allá de nociones internalizantes, individualistas y patologizantes.

Implicaciones para el trabajo comunitario

El presente estudio pretendió abordar las prácticas culturales de cuidado de la salud mental de las comunidades de los Montes de María desde metodologías que permitieran generar un conocimiento contextualmente apropiado y relevante. Por tal motivo, se realizaron grupos focales desde una lógica co-constructiva y colaborativa, la cual busca que los temas discutidos reflejen las prioridades y preocupaciones de los participantes (Horowitz et al., 2009), e involucra a la comunidad en la interpretación de los resultados, fomentando una toma de decisiones compartida (Viswanathan et al., 2004; Coughlin et al., 2017). Esto se refleja en la evaluación de las comunidades sobre el proyecto:

> esto es un proyecto que, pues nunca se había visto, porque siendo sincero esto no había pasado como tal, que llegaran unos psicólogos y dijeran, hombre, vamos a ver cuáles son los problemas que tienen la comunidad, no lo sabían, simplemente llegaban decían, tatata, tienes esto, tienes esto y chao, no te daban un diagnóstico como tal, pero estos nos están escuchando y están haciendo el proyecto dependiendo lo que uno les está diciendo. (Líder social, Montes de María)

De tal forma, se resaltan las ventajas de este enfoque; al participar activamente en las etapas del proceso, las comunidades desarrollan un mayor sentido de pertenencia y empoderamiento (Wallerstein & Duran, 2010), convirtiéndose en agentes de cambio dentro de su entorno (Gray et al., 2010), y fortaleciendo su capacidad de enfrentar los propios desafíos de manera autónoma (Wallerstein & Duran, 2010). Además, este enfoque permite la identificación prioridades comunitarias, no visibilizadas anteriormente con métodos tradicionales, promoviendo que las intervenciones resultantes sean más alineadas con las necesidades reales (Horowitz et al., 2009; Coughlin et al., 2017). Estos efectos se evidenciaron en las propuestas de los participantes:

> este tipo de herramientas nos están dando a nosotros la razón, o sea, yo no le vería sentido si esto lo dejamos nosotros que solamente sea un trabajo para finalizar un proyecto y que quede ahí o sea yo creo que aquí la verdadera razón de ser de nosotros como organizaciones, como líderes sociales que somos es aprovechar todas esas herramientas. (Líder social, Montes de María)

Respecto de una visión a futuro en la línea de investigación que se trabajó, los resultados obtenidos indican la pertinencia de implementar métodos de investigación etnográficos y longitudinales que permitan profundizar en las dinámicas sociales constitutivas de las prácticas culturales de cuidado de la salud mental, evaluar sus efectos terapéuticos y psicosociales, así como percibir con mayor claridad las barreras institucionales y posibles vías para una articulación entre los sistemas culturales de cuidado comunitarios y los servicios de salud mental que requiere el territorio.

Ahora, como limitaciones de este estudio se pueden mencionar las difíciles condiciones de acceso a las comunidades por situaciones de seguridad, pobreza y violencia que tienen que afrontar los líderes de los Montes de María. Si bien fue una fortaleza contar con participantes de comunidades afrodescendientes, indígenas,

campesinas, LGBTIQ+, de jóvenes y de mujeres, se debe indicar que el muestreo no fue representativo, por lo que los hallazgos empíricos no son generalizables a otras poblaciones en otros contextos. Además, el análisis tuvo como criterio el trabajo con líderes de los Montes de María como territorio general, sin especificar las diferencias de las prácticas culturales entre los municipios y grupos comunitarios; abordaje que amerita ser retomado en futuros estudios.

En todo caso, debe recordarse que las comunidades son quienes han sufrido los efectos del conflicto armado y en ese contexto han desarrollado estrategias efectivas de afrontamiento y cuidado. Se invita entonces a los profesionales de la salud y a los diferentes actores que tienen responsabilidad respecto de la salud mental y la construcción de paz a que dialoguen con las comunidades, reconozcan su acervo de conocimiento y lo incluyan al momento de plantear lineamientos o intervenciones en salud mental. Esto implica competencia y humildad cultural, referidas al conocimiento y valoración de las particularidades culturales de las personas con quienes se va a trabajar, lo que es coherente con la atención centrada en la persona y que ayuda a reducir las disparidades en materia de salud (Lekas et al., 2020). Así, solo se responderá adecuadamente a las necesidades de comunidades particulares como la que en este estudio nos convoca, cuando se considere una mirada macrocontextual de las personas, las comunidades, sus problemáticas y los diversos factores que pueden actuar como facilitadores o barreras en la implementación de programas de intervención dirigidos al cuidado de la salud mental en los territorios; esto, reconociendo la voz y agencia de la comunidad y la interacción entre salud mental y construcción de paz.

Agradecimientos

Esta investigación se realizó con el apoyo del Grupo de Investigación Lazos Sociales y Culturas de Paz y el Grupo de Investigación Psicología y Salud de la Pontificia Universidad Javeriana Bogotá y del Grupo Regional de Memoria Histórica de la Universidad Tecnológica de Bolívar.

Damos un agradecimiento especial a las comunidades de los Montes de María con quienes co-construimos el proyecto de investigación; sin sus experiencias y conocimiento no sería posible esta elaboración. A María José Martínez, Yessica Blanco, Daniela Valdelamar, Brindy Cantillo y Alejandra Peñata del Grupo Regional de Memoria Histórica, quienes apoyaron la organización y desarrollo del trabajo de campo con comunidad; y a Sara Lucía Forero, auxiliar de Investigación, por su apoyo en el análisis de la información.

Financiación

Este artículo fue realizado en el marco del proyecto de investigación: "Diseño Participativo De Un Modelo De Atención Psicosocial En Salud Mental En Las Comunidades De Los Montes De María En El Marco De La Emergencia Sanitaria Por Covid-19", financiado por el Ministerio de Ciencia, Tecnología e Innovación de Colombia, con recursos provenientes del Patrimonio Autónomo Fondo Nacional de Financiamiento para la Ciencia, Tecnología y la Innovación Francisco José de Caldas (Contrato 80740-866-2020). La participación de DRGP, DCRL, PA, WLL estuvo enmarcada en este proyecto. MJRR y LCS participaron en el proyecto desde la Convocatoria Jóvenes Investigadores e Innovadores (Número 209), como parte de la reactivación económica de Minciencias en 2021. La participación de los autores HC y CPM se dio en el marco del proyecto de investigación "A Participatory Psychosocial Care Approach to of Mental Health in Colombia (PPCColombia)" financiado por el Economic and Social Research Council ESRC , con recursos provenientes del Fondo Newton (Ref ES/V013394/1) del Reino Unido.

Los financiadores no estuvieron involucrados en la recolección o análisis de los datos reportados en este estudio.

Referencias

Abitbol, P. (2023) The Complex Intersection of Legacies of Violence and Legacies of Resistance in Montes de María, Colombia. En A. T. Chase, P. Mahdavi, H. Banai, & S. Gruskin. (Eds.), *Human Rights at the Intersections. Transformation through Local, Global, and Cosmopolitan Challenges.* (pp. 127-134). Bloomsbury Academic. https://library.oapen.org/handle/20.500.12657/60596

Arnoso Martínez, M., Cárdenas Castro, M., Beristain, C. M., & Afonso, C. (2017). Armed conflict, psychosocial impact and reparation in Colombia: Women's voice. *Universitas Psychologica*, *16*(3), 36-47. https://doi.org/10.11144/javeriana.upsy16-3.acpi

Arias López, B. E. (2019). Hilos, nudos y voces para la investigación y el cuidado en contextos de sufrimiento social. Revista Facultad Nacional de Salud Pública, 37, 42- 46. https://doi.org/10.17533/udea.rfnsp.339732

Assaz, D. A., Tyndall, I., Oshiro, C. K., & Roche, B. (2023). A process-based analysis of cognitive defusion in acceptance and commitment therapy. *Behavior Therapy*, *54*(6), 1020-1035. https://doi.org/10.1016/j.beth.2022.06.003

Bai, Z., Luo, S., Zhang, L., Wu, S., & Chi, I. (2020). Acceptance and commitment therapy (ACT) to reduce depression: A systematic review and meta-analysis. *Journal of affective disorders*, *260*, 728-737. https://doi.org/10.1016/j.jad.2019.09.040

Ballesteros de Valderrama, B. P., Novoa-Gómez, M., & Sacipa-Rodríguez, S. (2009). Prácticas culturales de paz en jóvenes adscritos y no adscritos a la Red de Jóvenes por la Paz. *Universitas Psychologica*, *8*(3), 683-702. https://revistas.javeriana.edu.co/index.php/revPsycho/article/view/616

Bang, C. L. (2015). Promoting mental health and community participation: a study on participatory arts practice, creativity and play in the city of Buenos Aires, Argentina. *Health, Culture and Society, 8*(1), 58-68, http://dx.doi.org/10.5195/hcs.2015.183

Bang, C. L. y Wajnerman, C. (2010) Arte y Transformación Social: La Importancia de la Creación Colectiva en Intervenciones Comunitarias. *Revista Argentina de Psicología, 48*(4), 89-103. http://hdl.handle.net/11336/188341

Bello Tocancipá, A. C., & Aranguren Romero, J. P. (2020). Voces de hilo y aguja: construcciones de sentido y gestión emocional por medio de prácticas textiles en el conflicto armado colombiano. H-ART. *Revista de historia, teoría y crítica de arte, (6)*, 181-204. https://doi.org/10.25025/hart06.2020.10

Benatuil, D., & Toscano, W. (2017). Sports and Community Well-being. En Tonon, G. (Ed.). Quality of Life in Communities of Latin Countries (pp. 37-54). Springer,Cham. https://doi.org/10.1007/978-3-319-53183-0_3

Bonilla-Escobar, F. J., Osorio-Cuellar, G. V., Pacichana-Quinayáz, S. G., Sánchez-Rentería, G., Fandiño-Losada, A., & Gutiérrez, M. I. (2017). Do not forget culture when implementing mental health interventions for violence survivors. *Ciência & Saúde Coletiva, 22*(9), 3053-3059. https://doi.org/10.1590/1413-81232017229.12982016

Brennan, Mark A. (2005). The Importance of Incorporating Local Culture into Community Development: FCS9232/FY773, 10/2005. *edis,* (15). https://doi.org/10.32473/edis-fy773-2005.

Cairns, A. J., Kavanagh, D. J., Dark, F., & McPhail, S. M. (2019). Goal setting improves retention in youth mental health: a cross-sectional analysis. *Child and adolescent psychiatry and mental health*, *13*(31), 1-8. https://doi.org/10.1186/s13034-019-0288-x

Campbell, C., & Burgess, R. (2012). The role of communities in advancing the goals of the Movement for Global Mental Health. *Transcultural Psychiatry*, *49*(3-4), 379-395. https://doi.org/10.1177/1363461512454643

Cardozo Rusinque, A. A., Cortés-Peña, O. F., & Castro Monsalvo, M. (2017). Relaciones funcionales entre salud mental y capital social en víctimas del conflicto armado y personas en situación de pobreza. *Interdisciplinaria*, *34*(2), 235-257. http://ref.scielo.org/99b8wr

Castaño, G., Sierra, G., Sánchez, D., Torres, Y., Salas, C., & Buitrago, C. (2018). Trastornos mentales y consumo de drogas en la población víctima del conflicto armado en tres ciudades de Colombia. *Biomédica, 38*(1), 70-85. https://doi.org/10.7705/biomedica.v38i0.3890

Cerquera-Córdoba, A. M., Matajira-Camacho, Y. J. y Peña-Peña, A. J. (2020). Estrategias de afrontamiento y nivel de resiliencia presentes en adultos jóvenes

víctimas del conflicto armado colombiano: un estudio correlacional. *Psykhe*, *29*(2), 1-14. https://dx.doi.org/10.7764/psykhe.29.2.1513

Cihon, T., & Mattaini, M. (2020). History and Progress in Cultural and Community Science. In Cihon, T., & Mattaini, M. (Eds.), *Behavior Science Perspectives on Culture and Community* (pp. 1-21) Springer, Cham. https://doi.org/10.1007/978-3-030-45421-0_1

Clift S. (2012). Creative arts as a public health resource: moving from practice-based research to evidence-based practice. *Perspectives in Public Health, 132*(3), 120-127. https://doi.org/10.1177/1757913912442269

Colorafi, K. J., & Evans, B. (2016). Qualitative descriptive methods in health science research. *herd: Health Environments Research & Design Journal, 9*(4), 16-25. https://doi.org/10.1177/1937586715614171

Coughlin, S. S., Smith, S. A., & Fernandez, M. E. (Eds.). (2017). Handbook of Community-Based Participatory Research. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780190652234.001.0001

Creswell, J. (1998). *Qualitative inquiry and research design. Choosing among five traditions*. Sage.

Espínola Verdín, V., & Guzmán Gómez, P. D. (2017). Reconstrucción del tejido social. *Propuestas para León, Elecciones 2018* (pp. 78-84). Universidad Iberoamericana de León. https://www.researchgate.net/profile/Vicente-Espinola-Verdin/publication/344388935_Reconstruccion_del_Tejido_Social/links/5f6f5b7f92851c14bc977c31/Reconstruccion-del-Tejido-Social.pdf#page=78

Firchow, P. (2020) *Recuperando la paz cotidiana: Voces locales para la medición y evaluación después de la guerra*. Editorial Universidad del Rosario. https://doi.org/10.12804/th9789587844382

Fledderus, M., Bohlmeijer, E. T., Smit, F., & Westerhof, G. J. (2010). Mental health promotion as a new goal in public mental health care: A randomized controlled trial of an intervention enhancing psychological flexibility. *American journal of public health*, *100*(12), 2372-2372. https://doi.org/10.2105/ajph.2010.196196

Fundación Cultura Democrática [FUCUDE], Consultoría para los Derechos Humanos y el Desplazamiento [CODHES], Corporación Opción Legal, Universidad Tecnológica de Bolívar Grupo Regional de Memoria Histórica, Mesa de Organizaciones de Población Desplazada de Los Montes de María [OPDS] Montes de María. (2020). *Los Montes de María bajo fuego, voces de las víctimas de la violencia. Comisión de la Verdad.* https://codhes.files.wordpress.com/2021/01/montes-de-maria-bajo-fuego.pdf

Gibson Watt, T., Gillanders, D., Spiller, J. A., & Finucane, A. M. (2023). Acceptance and Commitment Therapy [ACT] for people with advanced progressive illness, their caregivers and staff involved in their care: A scoping review. *Palliative Medicine*, *37*(8), 1100-1128. https://doi.org/10.1177/02692163231183101

Gray, N., Ore de Boehm, C., Farnsworth, A., & Wolf, D. (2010). Integration of Creative Expression into Community-Based Participatory Research and Health Promotion with Native Americans. *Family and Community Health, 33*(3), 186-192. https://doi.org/10.1097/fch.0b013e3181e4bbc6

Grupo Regional de Memoria Histórica [GRMH], Universidad Tecnológica de Bolívar, Organización de Poblaciones Desplazadas Étnicas y Campesinas de los Montes de María [OPDS], Equipo de Comunicación Rural OPDS Montes de María, Corporación Desarrollo Solidario, Consultoría para los Derechos Humanos y el Desplazamiento [CODHES] y Agencia de los Estados Unidos para el Desarrollo Internacional (USAID) (2017) *Fortalecimiento de las bases y las capacidades territoriales para la reconstrucción participativa de la memoria histórica del conflicto armado en los Montes de María. Informe consolidado del proyecto.* Cartagena.

Hayes, S. C., Strosahl, K. D., & Strosahl, K. (Eds.). (2004). *A practical guide to acceptance and commitment therapy*. Springer Science & Business Media. https://doi.org/10.1093/oxfordhb/9780197550076.001.0001

Hernández-Holguín, D. M. (2022). Dimensiones de lo colectivo de la salud mental en prácticas de construcción de paz, Colombia. *Fronteras, (18)*. 67-80 https://www.colibri.udelar.edu.uy/jspui/bitstream/20.500.12008/34899/1/rf_Hernandez-Holguin_2022n18.pdf

Horowitz, C. R., Robinson, M., & Seifer, S. (2009). *Community-Based Participatory Research from the Margin to the Mainstream: Are Researchers Prepared?*

Circulation, *119*(19), 2633-2642. https://doi.org/10.1161/circulationaha.107.729863

Inter-Agency Standing Committee [IASC] (2024). *Integrating mhpss and peacebuilding: a mapping and recommendations for practitioners*. https://interagencystandingcommittee.org/sites/default/files/2024-01/iasc%20Guidance%20Integrating%20mhpss%20and%20Peacebuilding%2C%20a%20Mapping%20and%20Recommendations%20for%20Practitioners..pdf

Lekas, H. M., Pahl, K., & Fuller Lewis, C. (2020). Rethinking Cultural Competence: Shifting to Cultural Humility. *Health services insights*, *13*, 1178632920970580. https://doi.org/10.1177/1178632920970580

Lopez Jaimes, R. J., Araque-Castellanos, F., Jaimes-Parada, G. Y., & Rivera-Porras, D. (2020). Capacities for the transformation of conflicts into survivors of anti-personal mines: a view from mental health. *Ciencia E Innovación En Salud*. https://doi.org/10.17081/innosa.107

López-López, W., & Taylor, L. K. (Eds.). (2021). *Transitioning to Peace. Promoting Global Social Justice and Non-violence*. https://doi.org/10.1007/978-3-030-77688-6

López-López, W., Rubio León, D. C., García-Padilla, D., Cakal, H., Abitbol, P., Pineda, C., Rocha, D., Reyes Rivera, M. J., & Guzmán Duarte, A. F. (2022). Medición de indicadores de salud mental de población en contexto de conflicto armado en Colombia: Revisión de alcance [Measuring mental health indicators of armed conflict population in Colombia: Scoping review]. *Universitas Psychologica, 21*, 1-17. https://doi.org/10.11144/Javeriana.upsy21.mism

Martínez Chaparro, A. M., Castro Yepes, L. M., & Antrivar Londoño, D. F. (2020). Apoyo social en mujeres sobrevivientes de desplazamiento intraurbano en Medellín-Colombia. *Revistade Paz y Conflictos, 13*(1), 275-291. https://doi.org/10.30827/revpaz.v13i1.9591

Mattaini, M. A. (1995a). Contingency Diagrams as Teaching Tools. *The Behavior Analyst, 1*(1), 93-98. https://doi.org/10.1007/bf03392695

Mattaini, M. A. (1995b). Teaching cultural design: Shaping new behaviorists. *Behavior and Social Issues*, *5*, 21-28. https://doi.org/10.5210/bsi.v5i2.220

Mattaini, M. A. (1996a). Envisioning cultural practices. *The Behavior Analyst, 19*(2), 257-272. https://doi.org/10.1007/bf03393168

Mattaini, M. A. (1996b). Public issues, human behavior and cultural design. In M. A. Mattaini & B. A. In Thyer (Eds.), *Finding solutions to social problems: Behavioral strategies for change* (pp. 13-40). American Psychological Association. https://doi.org/10.1037/10217-001

Mattaini, M. A. (2001). Constructing cultures of nonviolence: The PEACE POWER! strategy. *Education and Treatment of Children* (pp. 430-447). http://www.jstor.org/stable/42900502

Mattaini, M. A. (2004). Systems, metacontingencies, and cultural analysis: Are we there yet? *Behavior and Social Issues, 13*(2), 124-130. https://doi.org/10.5210/bsi.v13i2.20

Mattaini, M. A. (2020). Cultural Systems Anlysis: An Emerging Science. In Cihon, T., & Mattaini, M. (Eds.). *Behavior Science Perspectives on Culture and Community* (pp. 43-65). https://doi.org/10.1007/978-3-030-45421-0_3

Moreno-Murcia, L. M., Gómez, M. A., & Bustos Marín, T. (2021). Salud mental y conflicto armado en Colombia: una revisión documental. *IyD*, 8(2), 26-41. https://doi.org/10.26620/uniminuto.inclusion.8.2.2021.26-41

Movimiento por la Paz [MPDL]. (2017). *Cicatrices de la guerra en las colombianas. Los impactos de la violencia sexual en Montes de María. En el marco del proyecto "Prevención de la violencia sexual en el marco del conflicto y protección de los derechos sexuales y reproductivos, Colombia"*. MPDL. https://www.mpdl.org/noticias/america-latina/derechos-humanos/cicatrices-guerra-mujeres-violencia-sexual-colombia#sthash.argosnsn.dpbs

Moxham, L., Taylor, E. K., Patterson, C., Perlman, D., Brighton, R., Heffernan, T., & Sumskis, S. (2017). Goal Setting Among People Living with Mental Illness: A Qualitative Analysis of Recovery Camp. *Issues in Mental Health Nursing*, *38*(5), 420-424. https://doi.org/10.1080/01612840.2016.1271067

Na, E., Lee, K., Jeon, B. H., Jo, C., Kwak, U. H., Jeon, Y., Yang, K., Lee, E., & Jeong, J. (2022). Acceptance and commitment therapy for destructive experiential avoidance [ACT-DEA]: a feasibility study. *International*

journal of environmental research and public health, *19*(24), 16434. https://doi.org/10.3390/ijerph192416434

Novoa-Gómez, M. M., Barreto, I., & Manuel Silva, L. (2012). Consumo de cigarrillo y prácticas culturales en contextos universitarios. *Revista latinoamericana de psicología*, *44*(1), 97-110. https://dialnet.unirioja.es/servlet/articulo?codigo=3915913

Ortegón, T. M., Vinaccia, S., Quiceno, J. M., Capira, A., Cerra, D., & Bernal, S. (2022). Apoyo social, resiliencia, estrés percibido, estrés postraumático, ansiedad, depresión y calidad de vida relacionada con la salud en líderes comunitarios víctimas del conflicto armado en los Montes de María, Sucre, Colombia. *Revista eleuthera*, *24*(1), 158-178. https://doi.org/10.17151/eleu.2022.24.1.8

Perdomo, M., Sánchez, F., & Blanco, A. (2021). Effects of a community resilience intervention program on victims of forced displacement: A case study. *Journal of community psychology, 49*(6), 1630-1647. https://doi.org/10.1002/jcop.22499

Puerta Henao, E. (2015). Tejidos que dan sentido a la existencia. El significado que tiene para los habitantes de San Carlos la experiencia de reconstruir su tejido afectado por el conflicto armado. Relatos de vida. 2013-2015 [Tesis de Maestría]. Medellín, Colombia: Universidad de Antioquia. https://hdl.handle.net/10495/3526

Pulido-Castelblanco, D. P., Novoa-Gómez, M., & Muñoz-Martínez, A. M. (2013). Análisis metacontingencial de la obesidad mórbida como problemática de salud pública. *Terapia psicológica*, *31*(2), 239-247. https://doi.org/10.4067/S0718-48082013000200010

Quintero-Jurado, J., & Ossa-Henao, Y. (2018). Agrupaciones comunitarias juveniles: promoción de la salud mental y desarrollo de capacidades. *Trends in Psychology*, *26*, 1605-1618. https://doi.org/10.9788/tp2018.3-17

Ramírez-Giraldo, A., Hernández-Bustamante, O., Romero-Acosta, K., & Porras-Mendoza, E. (2017). Estado de salud mental de personas víctimas del conflicto armado en Chengue. *Psicología desde el Caribe, 34*(1), 49-70. http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S0123-417X2017000100049&lng=en&tlng=es

Ramírez, N. H., Juárez, F., Baños, A. J. P., Luzardo, J. G., Chávez, Y. M. R., Castilla, A. M. S., & Amaya, M. V. V. (2016). Afectaciones psicológicas, estrategias de afrontamiento y niveles de resiliencia de adultos expuestos al conflicto armado en Colombia. *Revista colombiana de psicología, 25*(1), 125-140. https://doi.org/10.15446/rcp.v25n1.49966

Ramírez Zuluaga, L. A. (2021). La juntadera: recuperación de prácticas comunitarias cotidianas como forma de reparación en Palmirita, municipio de Cocorná, Antioquia. *Antípoda. Revista de Antropología y Arqueología*, 79-100. https://doi.org/10.7440/antipoda45.2021.04

Ramos Delgado, D. (2013). ¿Qué son las prácticas artísticas comunitarias?" Algunas reflexiones prácticas y teóricas en torno a la construcción del concepto. *Pensamiento, palabra y obra*, (9), 116-133. https://doi.org/10.17227/2011804X.9pp0116.133

Rokhideh, M. (2017). Peacebuilding and psychosocial intervention: the critical need to address everyday post conflict experiences in northern Uganda. *Intervention*, *15*(3), 215-229. https://doi.org/10.1097/wtf.0000000000000161

Sánchez, V. A. A., López, J. V. S., & Parra, J. A. C. (2022). Sentido de vida en sobrevivientes del conflicto armado colombiano durante la pandemia por COVID-19. *Tempus Psicológico*, *6*(1). https://doi.org/10.30554/tempuspsi.6.1.4579.2023

Sarmiento-Marulanda, L. C., Aguilera-Char, A. A., González-Gil, C., & López-López, W. (2021). Psychosocial rehabilitation experiences of women victims of armed conflict in Montes de María, Colombia. *Archives of public health, 79*(1), 1-12. https://doi.org/10.1186/s13690-021-00548-w

Sliep, Y., Tankink, M., & Bubenzer, F. (2023). Co-creation as a methodology to integrate mental health and psychosocial support and peacebuilding. *Intervention Journal of Mental Health and Psychosocial Support in Conflict Affected Areas, 21*(2), 89-95. https://doi.org/10.4103/intv.intv_22_23

Strauss, A. & Corbin, J. (2002). *Bases de la investigación cualitativa: técnicas y procedimientos para desarrollar la teoría fundamentada.* Universidad de Antioquia.

Tamayo-Agudelo, W., & Bell, V. (2019). Armed conflict and mental health in Colombia. *bjpsych international, 16*(2), 40-42. https://doi.org/10.1192/bji.2018.4

Thompson, E. M., Destree, L., Albertella, L., & Fontenelle, L. F. (2021). Internet-based acceptance and commitment therapy: a transdiagnostic systematic review and meta-analysis for mental health outcomes. *Behavior Therapy*, *52*(2), 492-507. https://doi.org/10.1016/j.beth.2020.07.002

Tobar, E. J., Muñoz, J. A. B., Guerrero, N. E. L., & Oviedo, A. M. M. (2019). Las huellas del conflicto armado en la salud mental colectiva. Jangwa Pana. *Revista de Ciencias Sociales y Humanas, 18*(1), 132-149. https://doi.org/10.21676/16574923.2724

Todorov, J. C., & Freitas Lemos, R. (2020). Applying behavioral science to large-scale social changes. In Cihon, T. & Mattaini, M. (Eds.), *Behavior science perspectives on culture and* community (pp. 171-193). Springer. https://doi.org/10.1007/978-3-030-45421-0_8

United Nations Development Programme [UNDP] (2022) Guidance note: Integrating mental health and psychosocial support into peacebuilding. UNDP. https://www.undp.org/sites/g/files/zskgke326/files/2022-05/undp-IntegratingMental-Health-and-Psychosocial-Support-into-Peacebuilding-V2.pdf

Vera-Márquez, A. V., Sanudo, J. E. P., Jariego, I. M., & Ramos, D. H. (2015). Identidad social y procesos de adaptación de niños víctimas de violencia política en Colombia. *Revista latinoamericana de psicología*, *47*(3), 167-176. https://doi.org/10.1016/j.rlp.2015.06.006

Viswanathan, M., Eng, E., Ammerman, A., et al. (2004). Community-Based Participatory Research: Assessing the Evidence. *Evidence Report/Technology Assessment No. 99. Rockville, md: Agency for Healthcare Research and Quality.* https://api.semanticscholar.org/CorpusID:20744190

Wallerstein, N., & Duran, B. (2010). Community-Based Participatory Research Contributions to Intervention Research: The Intersection of Science and Practice to Improve Health Equity. *American Journal of Public Health, 100*(S1), S40-S46. https://doi.org/10.2105/ajph.2009.184036

Wilson, K. G., & Soriano, M. C. L. (2014). *Terapia de aceptación y compromiso (act): un tratamiento conductual orientado a los valores*. Ediciones Pirámide. http://biblioteca.univalle.edu.ni/files/original/3d546127a0bac8bafc82e24d2b1ec19cde656e72.pdf

Zamora-Moncayo, E., Burgess, R. A., Fonseca, L., González-Gort, M., & Kakuma, R. (2021). Gender, mental health and resilience in armed conflict: listening to life stories of internally displaced women in Colombia. *bmj global health, 6*(10), e005770. https://doi.org/10.1136/bmjgh-2021-005770

Apéndice A

Citas y ejemplos que ilustran los aspectos asociados con la práctica cultural reunirse con familiares, amigos, líderes y otros miembros de las comunidades.

Aspecto relacionado	Cita ilustrativa y/o ejemplo
Antecedentes estructurales	Ha sido un municipio que es folclórico, entonces allí siempre se ha llevado a cabo las integraciones por festividades, carnavales, semana santa, patronales, […], allí se mueve toda la comunidad de los corregimientos. […] esa red nace a través de la comunidad internacional para buscar digamos la recuperación de ese tejido social que se estaba perdiendo por la violencia, […] sirvió para hacer un acercamiento dentro de las comunidades, y por ende, hacer el planteamiento de los acuerdos de paz, […] y todo para tratar de llevar a cabo esa reconstrucción del tejido social que se había perdido en la violencia.
Ocasiones	Sobre el consumo de sustancias psicoactivas: Digamos que ya uno tiene la percepción de quién es la persona que consume y quiénes no consumen, [...] cuando ya nos damos cuenta de esas personas, [...] también hay un conversatorio, un acercamiento hacia estas personas [...] y también se busca de dónde viene ese problema.
Operaciones de establecimiento	[...] entonces es muy bonito, de esos reencuentros, de esas reuniones, de sentarnos a vernos una película, de realizar una actividad conjunta en una comunidad para que conversemos, nos escuchemos.
Modelos de imitación	Mi papá era maestro empírico y eso tal vez lo llevo yo en la sangre, [...] interactuar con la gente, hasta ahora después de viejo es que me vengo a dar cuenta, que papi era así, entonces ese interactuar con las comunidades. […] al contar uno se da cuenta que mi dolor es grande pero yo veo que el de la otra persona puede ser más grande y ella lo está superando entonces ese mismo ejemplo nos ayuda a superarnos un poquito más, porque nos damos cuenta que no somos nosotros solos los que hemos vivido estos hechos […].
Reglas	**Efecto sanador y fortalecedor de los encuentros** […] lo más bonito de todo es que cuando estamos en un espacio donde nos encontramos lo Monte Mariano que nos conocemos, nos damos un fuerte abrazo, lo hemos bautizado "el abrazo Monte Mariano" porque es un abrazo tan fraternal que nos lleva a… esa alegría de habernos encontrado con el otro. **Encuentros como recurso para afrontar las dificultades** Toda persona necesita de otras, no podemos hacer las cosas solos, no podemos sobrellevar la vida de nosotros prácticamente solos porque siempre necesitamos de alguien más, […] y en este caso, las personas necesitan de otras para poder sobrellevar su vida […].
Consecuencias	Entonces al recibir apoyo de otras personas te está dando a ti prácticamente la importancia que necesitabas escuchar te hace ver que tú eres alguien, que tú vales la pena, y te hace seguir adelante. Con unos jóvenes que están en riesgo que estamos haciendo un trabajo muy bonito con ellos y a ellos se les está dando la oportunidad de que ellos digan qué les gusta, qué no les gusta para poder ellos encaminarlos a la carrera que tienen y que la alcaldía los va a apoyar [...]. **Avances en construcción de paz:** […] sirvió para hacer un acercamiento dentro de las comunidades, y, por ende, hacer el planteamiento de los acuerdos de paz, porque con Montes de María nace ahí, para hacer las mesas de trabajo, las mesas de concertación, y todo para tratar de llevar a cabo esa reconstrucción del tejido social que se había perdido en la violencia. Logramos, así integrarnos en conjunto, sanar los duelos y todos los traumas que nos dejó pues esta experiencia amarga de desplazamiento, pudimos perdonar a los victimarios, pudimos sanar las heridas lo que no quiere decir que se nos olvidó, no se nos ha olvidado, pero recordamos sin dolor y sin rabia, pudimos perdonar porque entendimos que cuando perdonamos, somos libres.

Apéndice B

Citas y ejemplos que ilustran los aspectos asociados con la práctica cultural plantear metas de valor y realizar acciones para alcanzarlas.

Aspecto relacionado	Cita ilustrativa y/o ejemplo
Antecedentes estructurales	Gracias a Dios tuve la oportunidad de haber recibido apoyo psicosocial por parte de una organización internacional [...] durante 7 meses, y eso nos ayudó también para la construcción, para ayudar a nuestras comunidades, porque de cierta manera entre todas y todos, las organizaciones, nos vamos dando como ese apoyo de lo que hemos aprendido. Incluso a la ley [...] que supuestamente fue hecha para, más para los victimarios que para las víctimas ahí empezamos a trabajar nosotros por la víctima, por las cosas que correspondían y a solicitar la verdad, porque es una de las cosas que sana.
Ocasiones	Con el temor que había, nadie era capaz de asumir la responsabilidad de ser representante legal ni presidente una asociación y yo recuerdo que por el afán de sacar adelante a la comunidad y por el afán de, como de recuperar algo de lo que se había perdido, yo asumí la responsabilidad de crear nuevamente la organización. […] yo no me veía como padre y él apareció, apareció mandado de Dios, en el momento justo [...] es un motorcito para mí, mi polo a tierra, con todos sus problemas, con todos mis problemas, pero él es mi polo a tierra.
Operaciones de establecimiento	[...] porque el dolor no se ve, se lleva, se siente y es muy duro, es muy duro y es por eso que nosotras nos hemos metido en ese [...] en ese cuento de *inaudible* la memoria histórica que venimos realizando porque sabemos que eso nos está fortaleciendo. Mi sueño fue siempre ser líder, gracias a Dios confiaron en mi la comunidad, hasta el momento no los he defraudado, he luchado por ello y bueno, logré eso que quería, ser líder y gracias a dios hoy lo soy.
Modelos de imitación	[...] volvimos y retomamos la asociación municipal de campesinos, con nuevos líderes, hijos de los campesinos que fueron líderes en esos momentos, y que hoy a hoy ayudamos continuando al restablecimiento del derecho. Esa necesidad me hizo ponerme a hacer algo y yo veía a las otras mujeres trabajando y yo decía yo también puedo, yo no sé hacer esto, pero yo también puedo.
Reglas	**Importancia otorgada a la unión y búsqueda de beneficios comunitarios** Aprendí que para poder conseguir las cosas tendríamos que empezar a unirnos dentro de las comunidades. **Sobre la labor del líder social** Ya uno está acostumbrado a eso, que lo amenacen, que le digan, que lo injurien, que lo calumnien, pero uno sigue, porque uno nace, eso lo lleva uno en la sangre. **Valor de la educación** Una persona educada llega lejos, no está atenido mendigándole un puesto a nadie.
Consecuencias	Hemos ayudado a nuestros hijos a hoy ser profesionales, que algunas familias ya han logrado por sus esfuerzos tener sus viviendas propias, bueno, y como líderes de la comunidad hemos fortalecido internamente ayudando en nuestro nivel de vida haciendo nuestras propias empresas, algunos trabajan las artesanías, los hombres en la agricultura, […] esos son eventos que nos llenan a nosotros de satisfacción y motivación [...] [...] estamos organizados y nos vamos a seguir organizando [...] entonces los indígenas tienen un derecho de su ley propia, de su ley de origen, entonces por ese momento estamos recuperando nuestra identidad [...], hoy nos están reconociendo […] **Avances en construcción de paz** [...] hoy damos gracias a Dios porque uno de los sueños vagos y locos de un grupo de mujeres campesinas que se vieron un día derrotadas de un pueblo, pues hoy están en Museo Nacional eh obras que nosotros pues nunca [...] antes del desplazamiento lo hubiéramos pensado [...]. Se hizo la caracterización del daño, pero también eh ya tenemos la reparación colectiva, que nos ha traído muchos beneficios a nivel comunitario [...] tenemos proyectos productivos, tenemos artesanías comunitarias, [...].

Apéndice C

Citas y ejemplos que ilustran los aspectos asociados con la práctica cultural desarrollar actividades artísticas o artesanales.

Aspecto relacionado	Cita ilustrativa y/o ejemplo
Antecedentes estructurales	¿Qué hicimos la institución educativa? que nos tocó recibir a esos niños [...] el arte, el teatro, la pintura, la danza, [...] en Monte María todos los jóvenes, adultos y niños les gusta bailar, nos dimos cuenta esa situación y empezamos a meterle la danza, lo que ellos saben, la familia, ahí metemos al niño y al papá ¿por qué? Porque el papá coloca una gaita, él se va a mover y el hijo también se va a mover y va y canta y nos reuníamos y ahí empezamos a cantar [...] personas que decían: tenía mis años que no cantaba, pero empezaron a cantar, a sacar su canto, en cuestiones de memoria histórica [...]. ¿Qué me gusta? ¿qué hay para hacer en la cultura? Hay grupos de baile, hay grupos de música, entonces, hay esos espacios donde podemos ir y participa.
Ocasiones	Nosotros ahí liberábamos emociones porque yo decía en el momento en el que yo tengo rabia, yo estoy ansiosa, yo bailo mapalé, en el momento en el que estoy contenta bailo cumbia, [...]. En un taller que estaba haciendo, hago el primer dibujo de una serie que tiene la masacre y es donde los dibujo [...] y ese dibujo plasmó lo que tenía en mi cabeza al papel y fue la única forma de cerrar mis ojos y ya no verlos.
Operaciones de establecimiento	Yo en mi casa pongo música y me pongo a bailar sola, pero no es lo mismo uno liberar esas emociones con un grupo de danza, o sea, con unas compañeras. Se socializan para que vengan a ese carnaval y otras acciones culturales para que se sientan bien y se les olvide un poco todo lo que hemos sufrido.
Modelos de imitación	Una psicóloga [...], fueron ellos que nos enseñaron a nosotros a hacer el arte. Porque comenzaron con un arte que se llama *quilting*, cosíamos en forma de figuras geométricas. Que ha sido una forma de sanar su duelo en la medida en que van tejiendo y cómo van enseñando a sus hijos, por ejemplo, aquí tenemos a [...] fue enseñado, una nueva generación; [...] teje, fue aprendiz de su mamá, [...]. En el colegio, allí está mi profesora [...] ella influyó mucho ¿por qué?, porque aquí en el colegio hay diferentes formas en como nosotros los estudiantes nos podemos expresar, una de ellas es el teatro […].
Reglas	**Gusto regional por el arte** En Montes de María no hay un joven que no le guste bailar, en Monte María todos los jóvenes, adultos y niños les gusta bailar. **Papel del arte como terapéutico y sanador** Siempre lo he dicho, ha sido nuestro psicólogo y nuestro psiquiatra, el arte, porque a través de él fue que empezamos a contar nuestra historia. **Importancia de resignificar los eventos negativos** La solución es recordar, saber que te ocurrió, que fue difícil, que lo que te pasó no fue nada fácil, que fue adverso, que te dolió, pero que ya pasó y que a eso malo hay que sacarle algo bueno, porque la vida sigue, y no podemos dejar que eso adverso que nos aconteció, nos coja y nos lleve al extremo para acabarnos, tenemos que sacar algo bueno.
Consecuencias	Surgieron algunos grupos de gaita donde nuevamente ya se comienza a dar, a reagrupar la comunidad [...]. Todos estábamos aislados, pero, estábamos haciendo memoria individual y todos estábamos haciendo catarsis casi de esa forma, cualquier manifestación artística, dibujos, canciones, décimas, poemas, el solo escribir, el solo contar, algunas personas que le tengas confianza eso siempre ha ayudado a exorcizar a madurar duelo y es lo que hoy en día nos tiene contando, cantando y dibujando las historias. Entonces, al recordar el pasado de nuestros ancestros: cómo vivían y qué hacían, nos llena de emoción. Esa es la parte cultural, rescatar y transmitirles a nuestros jóvenes, a nuestro semillero, lo que es nuestro. Nuestros antepasados nos enseñaron a nosotros y, en la parte económica, pues eh [...] nos deja unos ingresos, nos ayudaría en nuestro nivel de vida a la familia, [...]. esos son los 2 significados, cultural y económico. **Avances en la construcción de paz** Sábanas de sueño, hoy como lugar de memoria y que está reconocida, pues le da vuelta al mundo, sí, porque tiene ese reconocimiento, ya que hacemos parte también de la red nacional de memoria, [...]. Personas que decían tenía mis años que no cantaba, pero empezaron a cantar, a sacar su canto, en cuestiones de memoria histórica para qué no se quedara eso allí, la institución educativa ¿Qué fue lo que hicimos? agarramos a los estudiantes tanto pequeños, primero que todos los papás fueron al colegio contaron la historia de lo que habían pasado, de lo que han vivido, de dónde venía, todo eso, eso el colegio hizo un libreto de todos los que iban cantando, lo que iban contando hasta que nos enteramos totalmente de todo lo que había pasado lo que han vivido.

Normas para Autores

La Revista Colombiana de Psicología (RCP) es una publicación semestral del Departamento de Psicología de la Universidad Nacional de Colombia; está dirigida a instituciones educativas y culturales, psicólogos y estudiantes de Psicología o disciplinas afines. Su objetivo principal es la divulgación de trabajos originales y arbitrados que se enmarquen en cualquiera de las áreas de investigación básica o aplicada propias de la psicología y que contribuyan al avance de esta.

Se aceptan reportes de investigaciones empíricas, contribuciones teóricas en formato de ensayo, trabajos de meta-análisis, revisiones críticas de literatura, y, en general, trabajos que sigan alguna de las variedades metodológicas de tipo científico en psicología.

Proceso de Envío, Arbitraje y Aceptación de Artículos

Los artículos que se sometan a revisión para publicación deben dirigirse y enviarse a la RCP, en medio electromagnético, versión MS Word, a través del sistema de gestión de revistas Open Journal System. Para enviar el manuscrito, ingrese a la página http://www.revistas.unal.edu.co/index.php/psicologia/index/, donde podrá inscribirse como autor y seguir las instrucciones para el envío de artículos. De esta forma podrá hacer seguimiento del proceso de su artículo.

Los artículos enviados deben ser inéditos y no pueden ser evaluados simultáneamente por otras revistas, razón por la cual es indispensable que los autores firmen una carta, suministrada por la revista, en la que certifiquen la originalidad del texto.

Para garantizar que no exista conflicto de intereses en el proceso de arbitraje, el autor enviará con el artículo, dos nombres de pares académicos que considere idóneos para evaluar su trabajo, con una justificación de la sugerencia. El editor se reserva el derecho de aceptar la sugerencia o escoger dos árbitros diferentes. Los autores no conocerán la identidad de los evaluadores.

Una vez revisados los criterios mínimos de presentación según las normas APA, y demás requerimientos formales, se enviará el manuscrito a pares académicos expertos en el área temática, quienes tampoco conocerán el nombre del autor. En un plazo de 6 a 12 meses para realizar la evaluación, los jurados elaborarán sendos conceptos académicos a partir de su conocimiento y experiencia en el área temática del artículo, con base en los cuales, el editor de la revista emitirá la decisión editorial en la que se le comunica formalmente al autor las posibilidades de publicación del artículo. Esto es: aceptado, rechazado o aceptado cuando realice los cambios solicitados por los evaluadores. En cualquiera de los casos, los autores recibirán un concepto general que integra las evaluaciones de cada uno de los árbitros, en el que se detallan las fortalezas del artículo y los aspectos que se deben modificar. En ocasiones, recibirán, el manuscrito con los comentarios que los evaluadores hicieron en el texto.

Cuando un artículo es aceptado, los derechos de publicación y reproducción en medios impresos y digitales que permitan el acceso público son de la RCP, bajo

licencia de Creative Commons. Sin embargo, se evaluará cualquier petición por parte del autor para obtener el permiso de su reproducción.

Una vez publicado el artículo, se enviará en formato .pdf a los autores. Para retirar un artículo antes de su publicación, el autor deberá dirigir una solicitud por escrito (impreso) al editor, asimismo esta se hará efectiva únicamente con la respuesta del editor.

Características Formales y Presentación de los Artículos

Los artículos no deben superar las 25 páginas más la sección de referencias y deben cumplir con las normas de presentación del estilo internacional de publicaciones científicas en psicología, recomendadas por la APA, 6.ª edición (2010). Las tablas o figuras se deben incluir en el archivo Word y, además, se debe adjuntar aparte el archivo original (e.g., .xls, .jpg, .tiff).

Se recomienda usar un lenguaje estándar para publicaciones científicas y evitar el uso de modismos propios de una región geográfica particular. Todo artículo que sea el informe de una investigación empírica (donde haya recolección de datos) debe estar adecuadamente dividido en las secciones recomendadas por la APA y contener la siguiente información:

Título: que corresponda a la información y al propósito del manuscrito.

Resumen: breve texto de máximo 160 palabras, en el que se condensen los aspectos más relevantes en cuanto a la metodología, los resultados y las conclusiones. Se deben incluir cinco palabras clave referentes al contenido y al área de la psicología a la que pertenece el trabajo, así como una versión en inglés del resumen y de las palabras clave.

Introducción: texto en el que se exponen tanto los antecedentes en el área de investigación como la descripción del problema de investigación o pregunta, cuya justificación debe ser clara, coherente y basada en la literatura consultada.

Sujetos o Participantes: el artículo debe explicitar las características principales de los participantes, así como el proceso de selección y asignación a grupos cuando sea pertinente. La APA recomienda el uso del término *participantes* cuando se trata de investigaciones con humanos, y el término *sujetos*, cuando es con animales.

Instrumentos: es indispensable que se identifiquen y describan claramente los instrumentos utilizados para la recolección de la información; si se trata de pruebas psicológicas, se deben mencionar sus propiedades psicométricas.

Procedimiento: es necesario describir las acciones relevantes durante la recolección de la información y el análisis de los datos.

Resultados: los resultados (expresados en datos) relevantes para los objetivos del estudio deben ser explícitos y claros. Cuando se requieran elementos complementarios, como tablas o figuras, los datos deben estar ordenados debidamente como lo indica la APA. Se recomienda evitar repeticiones de los datos en el cuerpo del texto y en las tablas.

Discusión y Conclusiones: toda discusión respecto a los resultados debe responder a las preguntas de investigación y hacerse a la luz de la literatura relevante. Asimismo, se deben presentar las conclusiones del estudio.

Citas y Referencias: todo artículo debe contener solo el listado de referencias citadas en él (máximo 60 referencias). Así mismo, todas las citas que aparezcan en el texto deben tener una referencia correspondiente. Tanto las citas como las referencias deben presentarse estrictamente como lo indica la APA. Recuerde que siempre que sea posible, se debe indicar el doi de cada uno de los artículos referenciados.

Apéndices: el texto puede incluir apéndices (páginas anexas) siempre y cuando sean importantes y estrictamente necesarios para la comprensión del texto.

Los artículos que no sean un informe de investigación como tal y que no contengan la información anteriormente desglosada pueden figurar como revisiones de una temática, crítica de una teoría o de un estudio empírico, o desarrollo de una propuesta teórica. Estos artículos deben ser presentados teniendo en cuenta los criterios generales de las normas APA en relación con títulos y subtítulos, resumen, estilo de redacción y citación de referencias. Adicionalmente, estos textos deben tener las siguientes características:

1. Problema claramente establecido que se desarrolle a lo largo de todo el texto.
2. Presentar de manera clara la importancia del tema o de la problemática analizada.
3. Argumentación y conclusiones claras y coherentes con el desarrollo del tema.
4. Referencias bibliográficas correspondientes a la temática estudiada y al tipo de estudio (para un artículo de revisión se esperan mínimo 50 referencias).

Ética y Buenas Prácticas en Publicación

La RCP se acoge a los lineamientos del Código Deontológico y Bioético del Ejercicio de la Psicología en Colombia (http://www.tribunales.colpsic.org.co) y de la APA (http://www.apa.org/ethics/code) en relación con los estándares éticos de investigación y publicación. Para la publicación de manuscritos en esta revista es necesario que el(los) autor(es) garantice(n) el cumplimiento de los principios éticos mencionados en la "Declaración de cumplimiento de los principios éticos", disponible en la página web de la revista (http://www.revistas.unal.edu.co/index.php/psicologia).

Adicionalmente, en la "Declaración de conflictos de intereses", disponible en la misma página web, se requiere que el(los) autor(es) revele(n) cualquier conflicto potencial de intereses, así como las instituciones de afiliación o acuerdos financieros relacionados con los productos o servicios empleados en el estudio presentado en el manuscrito.

Cómo Solicitar Copias y Acceder a Documentos

La RCP es publicada bajo las licencias de Creative Commons (http://creativecommons.org/licenses/by-nc-nd/2.5). Los artículos de esta revista están disponibles

online en la siguiente dirección electrónica: http://www.revistas.unal.edu.co/index.php/psicologia/issue/archive, y pueden ser reproducidos y copiados de acuerdo a las condiciones de esta licencia. Si usted desea suscribirse como lector en la revista, por favor diríjase a la sección de información para lectores en http://www.revistas.unal.edu.co/index.php/psicologia/information/readers, y siga los pasos que allí le indican. Adicionalmente, existe un número limitado de copias físicas disponibles para requerimientos especiales. Para solicitar copias físicas, por favor escriba a **revpsico_fchbog@unal.edu.co.**

¿Cómo Citar la RCP?

Al citar las revistas normalmente se utiliza el nombre completo de estas (e.g., formato APA). Sin embargo, dada la extensión del título (e.g., *Journal of Science Education and Technology*), algunas publicaciones utilizan sistemas de citación que requieren la forma abreviada. Se solicita a los autores que, cuando otras publicaciones les soliciten dicha forma, se refieran a la *Revista Colombiana de Psicología* con su abreviatura *Rev. colomb. psicol.* Adicionalmente, solicitamos a los autores citar cada artículo de la revista con su respectivo doi, el cual aparece en la portada del artículo.

Authors Guidelines

The Revista Colombiana de Psicología (RCP) is a biannual publication from the Department of Psychology at the Universidad Nacional de Colombia; it is aimed at educational and cultural institutions, psychologists and students of psychology or related disciplines. Its main objective is the dissemination of original works and refereed that fall within any of the areas of basic or applied research of psychology and contribute to its advancement.

We accept reports of empirical research, theoretical contributions in the form of essays, meta-analysis, critical reviews of literature, and in general, those works that follow any of the varieties of a scientific methodology in psychology.

Submission Process, Arbitration and Acceptance of the Article

Articles submitted for publication should be addressed and sent to the RCP, as MS Word file texts, through the Open Journal System. To send the article, go to page http://www.revistas.unal.edu.co/index.php/psicologia/index/, where you can register as author and follow the instructions for sending articles. This allows you to monitor the process of your article.

Articles submitted must be unpublished and may not be assessed simultaneously by other journals, which is why it is essential that authors sign a letter provided by the journal certifying the originality of these text.

To ensure no conflict of interest in the arbitration process, the author will send, along with the article, the names of two academic peers he/she considers qualified to evaluate his/her work, with the rationale for the suggestion. The editor reserves the right to accept the suggestion or choose two different referees. The authors will not know the identity of the reviewers.

After reviewing the minimum standards of presentation according to APA standards, and other formal requirements, the manuscript is evaluated by academic peers, to whom the name of the author will not be revealed. Within a period of 6 to 12 months for evaluation, reviewers will produce an academic concept drawn from their knowledge and experience in the theme area of the article.

Finally, based on the concepts of the referee, the editor of the journal will issue a decision in which he formally communicates to the author the possibility of publishing the article. That is, accepted, rejected, or accepted once the changes requested by the reviewers are made. In either case, authors will receive a general concept that integrates the evaluations of each of the referees, detailing the strengths of the article and the issues that must be modified. In many cases they will also receive the manuscript with the comments that different evaluators made to the text.

Whenever an article is accepted, the rights to publish and reproduce it either in print or online belong to the Revista Colombiana de Psicología, under Creative Commons license. However, any request from the author for reproduction permission will be assessed.

Once posted, the article will be sent to the authors in .pdf format. To remove an article before its publication, the author must send a written request to the editor, which will be effective only with the editor's response.

Formal Characteristics and Presentation of Articles

Articles should not exceed 25 pages (not taking into account references section) and must meet the standards of international style of presentation of scientific literature in psychology, recommended by the APA, 6th edition (2010). Tables and figures should be included in the Word document and, in addition, enclose the original file (e.g., .xls, .jpg, .tiff).

We recommend using a standard language for scientific publications and avoid using idioms characteristic of a particular geographic region. Any article that is the report of empirical research (which has data collection) should be properly divided into the sections recommended by the APA and contain the following information:

Title: Corresponding with the information and purpose of the manuscript.

Abstract: A brief text (160 words maximum) to condense the most relevant aspects concerning the methodology, results and conclusions. It should include 5 keywords on the content and the area of psychology that matches the work, and also a Spanish version of the abstract and keywords.

Introduction: A text setting out both the background in the research area and the description of the research problem or question; the justification must be clear, coherent and based on the reviewed literature.

Subjects or Participants: The article should explain the main characteristics of the participants and the selection and assignment to groups when appropriate. The APA recommends the use of the term *participants* when it comes to research with humans, and *subjects*, when animals.

Instruments: It is essential to clearly identify and describe the instruments used to collect information; when it comes to psychological tests, the psychometric properties should be mentioned.

Procedure: You must describe the relevant actions that were undertaken to collect information and analyze data.

Results: The results (shown as data) relevant to the objectives of the study should be explicit and clear. Whenever you require additional elements such as tables or figures, the data must be sorted properly as indicated by the APA. Avoid repeating the same data in the body of the text and in the tables.

Discussion and Conclusions: Any discussion about the results should be made in light of the relevant literature and answer the research questions. Likewise, the conclusions of the study must be presented.

Citations and References: Any article should contain only the list of references cited in the article (maximum 60 references.) Conversely, all the cited documents in the text must have a reference. Both, the cited documents and the list of references, must be submitted strictly as indicated by the APA. When available, the doi number must be included in the list of references.

Appendices: The text may include appendices (attached pages) provided they are considered important and strictly necessary to clarify the understanding of the text. Otherwise, it is not recommended to include them.

Articles that are not a research report as such and do not contain the above information can be submitted as itemized revisions of a thematic, as review of a theory or empirical research, or as development of a theoretical proposition. These articles should be presented taking into account those general criteria of the APA regarding titles and subtitles, abstracts, writing style and citation of references. Additionally, these texts should have the following characteristics:

1. Problem clearly stated and developed throughout the text.
2. Importance of the issue or analyzed problematic clearly presented.
3. Arguments and conclusions clear and consistent with the development of the subject.
4. References for the topic being studied and the type of study (for a review article at least 50 references are expected.)

Ethics and Publication Malpractice

The RCP accepts the bio-ethical and deontological code for the practice of psychology in Colombia (http://www.tribunales.colpsic.org.co) and the APA ethics code as ethical standards (http://www.apa.org/ethics/code/) for research and publication. As a policy of RCP, accepted authors must warrant compliance with the principles mentioned in the document "Ethical principles for publication" available at the webpage of the journal (http://www.revistas.unal.edu.co/index.php/psicologia).

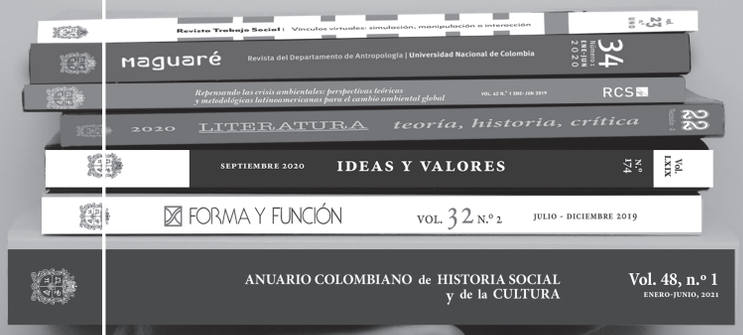
Additionally, accepted authors must read and sign a document certifying that they not have a conflict of interests in relation with the research being published. This document is available in the webpage of the journal. In this document, accepted authors must declare any potential conflict of interest, as well as the institutions of affiliation and the financial sources related to the research that is being published in the journal.

Copies and Documents Request

The RCP is published under the Creative Commons license and can be copied and reproduced according to the conditions of this license (http://creativecommons.org/licenses/by-nc-nd/2.5). RCP articles are available online at http://www.revistas.unal.edu.co/index.php/psicologia/issue/archive. If you would like to subscribe to the RCP as reader, please go to http://www.revistas.unal.edu.co/index.php/psicologia/information/readers and follow the instructions mentioned in the webpage. Additionally, a limited number of print journals are available upon request. To request print copies, please email **revpsico_fchbog@unal.edu.co**.

How to Cite the RCP When Using the Abbreviated Form?

When citing a journal, most citation formats require using the complete journal title (e.g., APA format). However, given the length of the title, some journals (e.g., *Journal of Science Education and Technology*) use citation formats that include the abbreviated citation form. RCP asks authors referring to *Revista Colombiana de Psicología* as *Rev. colomb. psicol.*, when the abbreviated form is required by other publications. Additionally, we ask authors to cite articles from our journal with the respective doi numbers, when possible. Doi numbers are indicated in the title page of each article.



NUESTRAS REVISTAS

Facultad de Ciencias Humanas

Portal de revistas Universidad Nacional de Colombia

www.revistas.unal.edu.co

PROFILE Issues in Teachers' Professional Development
Vol. 26, N.º 2 • July-December 2024
Departamento de Lenguas Extranjeras
www.profile.unal.edu.co
rprofile_fchbog@unal.edu.co

Revista Colombiana de Psicología
Vol. 33, N.º 1 • January-June 2024
Departamento de Psicología
www.revistacolombiana
psicologia.unal.edu.co
revpsico_fchbog@unal.edu.co

Forma y Función
Vol. 37, N.º 2 • July-December 2024
Departamento de Lingüística
www.formayfuncion.unal.edu.co
fyf_fchbog@unal.edu.co

Cuadernos de Geografía: Revista Colombiana de Geografía
Vol. 33, N.º 2 • July-December 2024
Departamento de Geografía
www.cuadernosdegeografia.unal.edu.co
rcgeogra_fchbog@unal.edu.co

Anuario Colombiano de Historia Social y de la Cultura
Vol. 51, N.º 1 • January-June 2024
Departamento de Historia
www.anuariodehistoria.
unal.edu.co
anuhisto_fchbog@unal.edu.co

Literatura: Teoría, Historia, Crítica
Vol. 26, N.º 2 • July-December 2024
Departamento de Literatura
www.literaturathc.unal.edu.co
revliter_fchbog@unal.edu.co

Ideas y Valores
Vol. LXXIII, N.º 184 • January 2024
Departamento de Filosofía
www.ideasyvalores.unal.edu.co
revideva_fchbog@unal.edu.co

Revista Maguaré
Vol. 38, N.º 2 • July-December 2024
Departamento de Antropología
www.revistamaguare.unal.edu.co
revmag_fchbog@unal.edu.co

Revista Colombiana de Sociología
Vol. 47, N.º 1 • January-June 2024
Departamento de Sociología
www.revistacolombianasociologia.
unal.edu.co
revcolso_fchbog@unal.edu.co

Trabajo Social
Vol. 26, N.º 2 • July-December 2024
Departamento de Trabajo Social
www.revtrabajosocial.unal.edu.co
revtrasoc_bog@unal.edu.co

Desde el Jardín de Freud
N.º 22 • January-December 2022
Escuela de Estudios en Psicoanálisis y Cultura
www.jardindefreud.unal.edu.co
rpsifreud_bog@unal.edu.co

Matices en Lenguas Extranjeras
N.º 15 - 2 • July-December 2021
Departamento de Lenguas Extranjeras
www.revistas.unal.edu.co/index.
php/male
revlenex_fchbog@unal.edu.co

PUNTOS DE VENTA

UN la librería, Bogotá Plazoleta de Las Nieves • Calle 20 N.º 7-15 • Tel. 3165000 ext. 29494 | **Campus Ciudad Universitaria** Edificio de Posgrados de Ciencias • Humanas Rogelio Salmona (225) • Tel.: 316 5000, ext. 20040
www.unlalibreria.unal.edu.co | libreriaun_bog@unal.edu.co

Todas nuestras revistas académicas se pueden consultar *on-line* bajo la modalidad de acceso abierto.

CENTRO EDITORIAL

Edificio de Posgrados de la Facultad de Ciencias Humanas (225), sótano • Tel: 3165000 ext. 16139, 16141
editorial_fch@unal.edu.co | www.humanas.unal.edu.co

Revista Colombiana de Psicología, vol. 34, n.º 2

Texto compuesto en caracteres Minion, Syntax y Serifa. En las páginas interiores se utilizó papel Book cream de 59,2 gramos y, en la carátula, papel Propalcote de 280 gramos. Impresa en Bogotá, Colombia, en julio de 2025