

VOL. 32, n.º 1

ENERO-JUNIO 2023

ISSN 0121-5469 impreso · 2344-8644 en línea

REVISTA **COLOMBIANA** DE PSICOLOGÍA

Departamento de Psicología · Facultad de Ciencias Humanas



UNIVERSIDAD
NACIONAL
DE COLOMBIA

REVISTA COLOMBIANA DE PSICOLOGÍA

VOL. 32, n.º 1, ENERO-JUNIO 2023

ISSN 0121-5469 IMPRESO | 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.

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Editorial

HACE UN par de años, durante un encuentro de investigadores, realicé una presentación sobre el uso de las estrategias de variable instrumental en el contexto de la investigación psicológica y educativa. La primera crítica fue que no era claro para qué les servía eso a los psicólogos, y, más generalmente, cuál era la relevancia investigativa de este tipo de metodologías. Al año siguiente, Joshua Angrist y Guido Imbens, quienes habían desarrollado este tipo de técnicas, recibieron el Premio Nobel de Economía.

Yo me había acercado a estas metodologías a partir de una lectura cuidadosa de la investigación de Esther Duflo y Abhijit Banerjee, quienes ganaron el Nobel de Economía en 2019 y habían utilizado este tipo de técnicas de manera consistente en su investigación. Para mí era un reto no solo cognitivo sino disciplinar el acercarme a estas herramientas, de forma tal que pudiera construir un análisis relevante y actual.

Mi percepción general era que la economía durante años había colonizado espacios investigativos propios de otras disciplinas de las ciencias sociales y era necesario reivindicar los aportes de la psicología y la pedagogía. Para hacer esto, se requería una tarea comunicativa pero también un conocimiento profundo de las metodologías de punta utilizadas en la economía. La sensación en muchas, no todas, las investigaciones económicas en educación y otras áreas de la política pública era que se ocultaba una profunda ignorancia del saber disciplinar en ciencias sociales, psicología y educación, detrás de una sofisticación metodológica y estadística. Para mí era claro que no bastaba con reconocer este hecho, sino que era necesario incorporar herramientas sofisticadas para presentar y testear décadas de investigación empírica de una forma que tuviera un mayor impacto.

En economía, este conjunto de técnicas se denomina estrategias de estimación causal y son básicamente tres: propensity score matching (PSM), regresión difusa y variable instrumental. La caja de herramientas de los economistas también incluye técnicas relacionadas como el análisis de diferencias en diferencias y los modelos mixtos. Desde la *Revista Colombiana de Psicología* queremos invitar a los autores a estudiar e incorporar estas metodologías y a presentar artículos basados en ellas en nuestra publicación.

Artículos

doi: <https://doi.org/10.15446/rcp.v32n1.94808>

Parental Skills and Academic Competences in School Children: The Mediator Role of Executive Functions

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How to cite this article: Azar, E., Vargas-Rubilar, J., & Arán-Filippetti, V. (2023). Parental Skills and Academic Competences in School Children: The Mediator Role of Executive Functions. *Revista Colombiana de Psicología*, 32(1), 11-27. <https://doi.org/10.15446/rcp.v32n1.94808>

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SCIENTIFIC RESEARCH ARTICLE

RECEIVED: MARCH 31, 2021—ACCEPTED: JULY 06, 2022

Abstract

The role of parenting in the development of children's learning constitutes, at present, part of the discussion in the psychoeducational field. Although parental competences (PC) and executive functions (EF) have been investigated by psychology and neuropsychology, their relationship with academic competences remains to be fully studied. The aim of this investigation was to analyze the effect of PC perceived by parents on behavioral EF and performance-based measures of reading and mathematical competences in children. We worked with 131 school children of both sexes, between 9 and 11 years old, and their respective parents. Multivariate Analysis of Variance (MANOVA) and structural equation model (SEM) were used. The results indicate that parental skills from the parents' perspective have a significant effect on EF, reading, and mathematical skills. However, the best fit model indicates that EFs mediate the relationship between parenting skills and reading and math skills.

Keywords: parental skills, executive functions, academic competences, learning, children.

Competencias Parentales y Competencias Académicas en Niños Escolarizados: El Rol Mediador de las Funciones Ejecutivas

Resumen

El rol parental en el desarrollo del aprendizaje de los niños constituye, en el presente, una parte de la discusión en el campo psicoeducativo. Aunque las competencias parentales (CP) y las funciones ejecutivas (FE) han sido investigadas por la psicología y la neuropsicología, su relación con las competencias académicas permanece abierta para ser estudiada a profundidad. El objetivo de esta investigación es analizar el efecto de las CP percibidas por los padres en FE comportamentales y las mediciones basadas en el desempeño de las competencias lectoras y matemáticas en niños. Trabajamos con 131 niños y niñas escolarizados, entre 9 y 11 años, y sus padres. Se hizo uso del Análisis Multivariado de Variancia (MANOVA) y Modelos de Ecuaciones Estructurales (SEM). Los resultados indican que las competencias parentales desde la perspectiva de los padres poseen un efecto significativo en las FE, la lectura y las habilidades matemáticas. De forma que los modelos mejor ajustados indican que las FE median la relación entre las competencias parentales, lectoras y matemáticas.

Palabras clave: habilidades parentales, funciones ejecutivas, competencias académicas, aprendizaje, niños.

Introduction

THE INTEREST in the relationships between parents and children in psychology has always been present and it is a topic closely related to the theories of human development (Vargas-Rubilar & Richaud, 2018). In recent decades, parenting has emerged as a defined construct which refers to the activities of care, education, and promotion of socialization, developed by fathers, mothers or caregivers towards their children (Bayot & Hernández, 2008; Bornstein & Bornstein, 2014; Sanders & Turner, 2018). One of the most recently analyzed aspects of parenting is parenting competences (Azar, Vargas-Rubilar, & Arán-Filippetti, 2018; Rodrigo, Máiquez, Martín, & Rodríguez, 2015; Vargas-Rubilar, Lemos, & Richaud, 2020). Parental competences refer to the emotional, social, and cognitive abilities of parents or caregivers to care for, protect, educate, and socialize their children (Barudy & Dantagnan, 2010; De Cock, Henrichs, Klimstra, Maas, Vreeswijk, Meeus, & van Bakel, 2017). Authors have also defined parental competences as the self-perceived ability of parents to face the educational task of their children in a satisfactory and effective way (Bayot & Hernández, 2008).

Earlier research has shown that the specific parental practices favor the development of children's cognitive skills (see, for a review, Vargas-Rubilar & Arán-Filippetti, 2014) and in particular that of executive functions (EF). EF are considered higher-order cognitive processes that enable self-regulation by formulating goals, organizing plans to achieve them, and executing the plan effectively (Lezak, 1995). Overall, the dimensions into which executive skills are grouped are: (a) working memory (WM), defined as the ability to keep information in the mind where it can be manipulated; (b) cognitive flexibility, comprising creative thinking and flexible adjustments in the face of changes; and (c) inhibition (Miyake, Friedman, Emerson, Witzki, Howerter, & Wager, 2000). Several studies agree that EFS require time to reach their full potential, which is explained by the slow maturation of the prefrontal cortex (PFC) (Diamond, 2002). However, the genetic information

for the structural and functional changes of the PFC is not enough to guarantee the development of EFS (Arán-Filippetti, 2011; González, 2013). EFS receive, in turn, a differential effect of the particular condition on the child's development, such as the parenting culture, parenting styles, learning modalities, among others, as well as schooling, especially the specific teaching-learning processes (Thorell, Lindqvist, Bergman Nutley, Bohlin, & Klingberg, 2009; Wenzel & Gunnar, 2013). Studies in this line have indicated that children with secure attachment have an advantage over insecure, ambivalent, and disorganized ones, in various developmental domains such as language, metacognitive functioning, cognitive flexibility, ability to express internal states and understanding of negative emotions in others (González, 2013). González (2013) also reports that stressful experiences in the child's early interactions (e.g., abandonment, abuse, etc.) can cause permanent damage to the orbitofrontal cortex, impacting on regulation and social adjustment behaviors, associated with future behavioral and psychic problems. As regards particularly to the effect of parental competences on EF, some recent studies showed significant associations between most of the dimensions of parental abilities and specific domains of EF of children in the Chilean population (Bernal-Ruiz, Rodríguez-Vera, González-Campos, & Torres-Alvarez, 2018; Bernal-Ruiz, Ortega, & Rodríguez-Vera, 2020).

Parental skills, executive functions, and academic competences

Current paradigms in the educational field promote education by competences with the purpose of developing in students their ability to overcome in a comprehensive way, from a know-how to do, the challenges that arise by the accelerated changes of the new century (National Education Law No. 26.206, chapter II, art. 11; Provincial Education Law No. 9870, art. 4). For De Miguel (2006), competences are a potential of behaviors adapted to a situation, an aspect entrenched in the student's personality that can explain and/

or predict their performance, and are linked to underlying characteristics such as motives, self-concept, knowledge, skills, etc. Competences will be conditioned or shaped both by the context in which their knowledge, skills, values, etc. are developed, as well as by the study situations and the students' track of experiences inside and outside school (Moya & Luengo, 2011).

Regarding the concept of *reading competence* (RC), Jiménez Pérez (2014) states that it encompasses reading comprehension, which is an abstract fact that depends on the individual ability of each subject, while RC is the ability of human beings to use their reading comprehension in a useful way in the society around them. In this way, the ability is closely linked to intellectual or emotional capacities, or the individual's psychological profile, while competence refers to a pragmatic variable, social intelligence, and socialization. On the other hand, *mathematical competences* (MC) entail the ability to use numbers, perform basic operations, use symbols and forms of communication of mathematical reasoning, to interpret and solve problems of daily life and work (Education Law Provincial No. 9870, art. 4). D'Amore, Díaz and Fandiño (2008) argue that MC are complex and dynamic. Complex, since it implies two interacting and inseparable components: use (of an exogenous nature) and domain (of an endogenous nature), in the cognitive, interpretative, and creative elaboration of mathematical knowledge in which different contents are linked and related. Dynamic, because it encompasses not only mathematical knowledge, but also metacognitive, affective, motivational, and volitional factors, being in most cases the result of diverse and interconnected knowledge. In this sense, it implies use, mastery, and availability.

Neurosciences have made significant contributions to brain functioning and the cognitive processes for learning (Dehaene, 2016; Mogollón, 2010). Likewise, other studies (Lipina & Segretín, 2015; Posner & Rothbart, 2018) have pointed out the importance of family environment, particularly the role of parents in the development of motivation to

read and the acquisition of its preconditions (i.e., development of motor skills, cognitive processes, oral language skills or abilities, and phonological awareness). Related studies also state that the competences put into play by those who fulfill parental functions have a relevant impact on the development and maturation of brain functions, as well as on the possibilities of learning, particularly school learning (Cervigni, Stelzer, Mazzoni, & Álvarez, 2012; Basuela, 2014; Fernández, 1987; Paín, 1975; Posner & Rothbart, 2018). Consistently, Mero, Pico, Rodríguez, and Bello (2015) indicated that the causes of low academic performance are very diverse, and that family variables that may be associated with other pedagogical and/or personal characteristics of the student stand out.

Research in cognitive neuroscience has also related the academic performance of students with the cognitive and affective resources placed by them in the classroom environment. Studies in this line have indicated the existence of a link between the students' EF and their performance obtained in calculation, reading, and writing activities (Blair, 2013; Evans & Rosenbaum, 2008; Geary, Hoard, Byrd-Craven, Nugent, & Numtee, 2007). In the academic area of mathematics, studies such as those by Arán-Filippetti and Richaud (2017) have shown that WM would be involved in numerical production and mental calculation, while cognitive flexibility would be selectively associated with solving arithmetic problems. Consistently, Risso et al. (2015) and Veleiro and Thorell (2012) have shown the predictive role of WM on mathematical performance. Research conducted with elementary school students also suggests that WM and attention control play a key role in supporting emerging literacy and mathematical calculation and problem solving (Passolunghi, Vercelloni, & Schadee, 2006). Likewise, several investigations have shown the relationship between EF and RC. Among these, Arán-Filippetti and López (2016) found that WM and spontaneous cognitive flexibility (i.e., verbal fluency) would be the main executive processes that would explain, in part, individual performance

variations in reading comprehension tasks. Also, Cruz and Tomasini (2005) reported the impact of self-regulation processes on reading comprehension. Previous study results have also shown that during EC tasks children create a purpose, think, review their plan, supervise it, and motivate themselves to execute it (Reyes, Barreyro, & Injoque-Ricle, 2015).

Overall, the competences displayed by those who fulfill parental functions have a relevant impact on the development and maturation of brain functions (Posner & Rothbart, 2018), as well as on the possibilities of learning—particularly school learning— (Barudy, 2010; Basuela, 2014; Fernández, 1987; Fernández, 2002; Paín, 1975; Vargas-Rubilar & Arán-Filippetti, 2014). However, scientific research regarding the relationship between parental competences, EF and academic competences in school-age children is scarce in the Latin American population and practically non-existent in the Argentine population. Although some research has examined the role of parenting on children's cognitive development, there are few studies about parenting skills in processes related to learning in school-age that analyze the effect of mediating variables. Thus, this research aimed at analyzing the effect of parental skills on academic competences in school-age children, examining the mediating role of EF. Based on the aforementioned objectives, the following hypotheses were proposed:

H1. Parental competences perceived by parents have a positive and significant effect on children's EF.

H2. Parental skills perceived by parents have a positive and significant effect on children's academic competencies.

H3. EFs mediate the relationship between parental skills and academic competences.

Method

Participants

We worked with a sample of 131 children of both sexes (63 girls = 48.1% and 68 boys = 51.9%), between 9 and 11 years old ($M = 9.84$; $SD = 0.71$)

from public schools and their respective parents (110 women = 83.96% and 21 men = 16.04%; $Mage = 36.68$; $SD = 7.05$), citizens of Córdoba, Argentina. The criterion of inclusion was that children were not repeaters and did not have a clinical, neurological, or psychiatric history.

Instruments

Perceived Parental Competence Scale (ECPP-p; Bayot & Hernández, 2008. Argentine adaptation by Azar, Vargas-Rubilar, & Arán Filippetti, 2018). The Argentine version of the ECPP-p is composed of 22 items that assess four dimensions: school involvement, dedication and orientation, shared leisure, and assumption of the role of father or mother. The instrument has four response options. Its psychometric functioning was adequate in the Argentine population (Azar et al., 2018). The analysis of the discriminative power of the items showed that the 22 items are discriminative; they obtained a score = $p < .001$. The reliability of the total scale from the aspect of internal consistency was highly satisfactory ($\alpha = .83$). That of the dimensions ranged between low and high values (.45 to .73). The construct validity study reported a good fit with four factors: school involvement, dedication and orientation (integrating the factors personal dedication and advice and orientation of the original scale), shared leisure, and assumption of the role of father or mother (Azar et al., 2018).

Childhood Executive Functioning Inventory (CHEXI; Thorell & Nyberg, 2008). It assesses EF in children aged 4 to 12 years from the perspective of parents and/or teachers. This questionnaire has 24 items and presents five response options. It includes four subscales: working memory, planning, inhibition, and regulation. By means of EFA techniques, a two-factor solution have been found (i.e., working memory and inhibition in Swedish speaking children; Thorell & Nyberg, 2008). Both dimensions show acceptable levels of internal

consistency (Cronbach's $\alpha = .89$ for WM and $= .85$ for inhibition) and adequate reliability (Thorell, Veleiro, Siu, & Mohammadi, 2013). A recent study also demonstrated that the CHEXI inventory is a reliable measure to assess EF in Argentinean Spanish-speaking children (Gutiérrez, Arán Filippetti, & Lemos, 2021). Regarding the parent form, the reliability measured through ω McDonald was adequate for both factors (WM $\omega = .86$; IN $\omega = .84$) and the total scale ($\omega = .92$; Gutierrez et al., 2021).

EVALUA batteries (García Vidal, González Manjón, García Ortiz, & García Pérez, 2013). The EVALUA battery allows detecting school learning difficulties. It assesses general skills related to essential elements of the level of development in school age (cognitive, personal, and social), and specific skills related to dimensions of the school learning process (Reading, Writing, Mathematics, work and study habits, and academic orientation). The battery consists of two sub-batteries, EVAMAT and EVALEC. The EVAMAT 4 and 5 and EVALEC 4 and 5 batteries of the adaptation were applied (García Vidal, González, García Ortiz, & García Pérez, 2013).

EVALEC version 2.0 of the EVALUA battery (García Vidal et al., 2013). This instrument is a set of tests aimed to assess basic RC. Battery and test studies report a high level of reliability between .93 (EVALEC-8) and .98 (EVALEC-7). The EVALEC 4 and EVALEC 5 batteries are structured in two large blocks: reading efficiency and processes directly related to reading comprehension. The studies of the batteries and the EVALEC 4 and 5 tests report a high level of reliability, being $\alpha = 0.94$ and $\alpha = 0.94$ respectively (García Vidal et al., 2013). The inter-test correlation is all significant at 0.01 (bilateral). In both batteries (EVALEC-4 and EVALEC 5) and with the batteries as a whole, a high inter-test correlation of most tests stands out. This indicates a high level of homogeneity (García Vidal et al., 2013).

EVAMAT version 2.0 of the EVALUA battery (EVAMAT-4: García Vidal, García Ortiz, &

González, 2013; EVAMAT-5: García Vidal et al., 2013). This instrument is designed to assess the development of mathematical skills, and it includes the following tests: (a) numbering tests; (b) calculus tests: children's knowledge and mastery of operations and procedures to solve them; (c) geometry tests (not applied); (d) evidence of treatment of the information and chance; (e) problem-solving tests that assess skills involved in solving problem situations of a quantitative nature related to all of the above. Battery studies and EVAMAT 4 and 5 tests report a high level of battery reliability, $\alpha = .97$ and $\alpha = .95$, respectively (García Vidal et al., 2013). In all cases, the inter-test correlation is high, with a correlation coefficient greater than .50. In the case of EVAMAT 4, all the correlations are significant at 0.01 bilateral in both cases. A high inter-test correlation was found for most of the tests with each other, and with the batteries as a whole, which indicates a high level of homogeneity (García Vidal et al., 2013).

Data collection

To collect data from parents, they were contacted by their children's school, where they were introduced to the research objectives in a meeting organized by teachers. Then, they received the protocols, informed consents, and a note that explained the objectives and relevance of the study, as well as the ethical precautions. The evaluation of the children was carried out in groups during the usual class time.

Data analysis

Multivariate Analysis of Variance (MANOVA) was used to analyze differences regarding EF and performance on objective tests that assess children's mathematical and reading competence, according to parental skills from the parents' perspective. For said data analysis, the statistical software SPSS version 23 was used. To test different structural equation models, the AMOS version 16 was used (Arbuckle, 2007). The fit of the models was estimated using the χ^2 test and the following Fit indices: CFI (Comparative Fit Index) and NFI (Normed Fit Index). In

addition, the mean square error of approximation (RMSEA) was calculated for each model.

Ethical considerations

Actions carried out within the framework of this work considered the international ethical mandates for research with human beings (i.e., Council for International Organizations of Medical Sciences [CIOMS], World Health Organization [WHO] & Pan American Health Organization [PAHO], 2016) and the statements of the Interamerican Society of Psychology (ISP, 2019) on ethical behavior (American Psychological Association [APA], 2010; Colegio Colombiano de Psicólogos, 2009). The students participated anonymously and voluntarily, and the parents were asked to sign the informed consent to apply the instruments. No incentives of any kind were given in exchange for participation. The information collected was treated confidentially and was not accessible to anyone outside of the investigation.

Results

Effect of parental competences on EFS

Shared Leisure. An overall significant effect of this dimension on EF was found, Hotelling's $F(8, 246) = 2.635, p = .009, \eta^2 = .79$. The Eta squared value above 0.06 indicates a medium effect. Univariate analysis indicated that there are significant differences in the four EF subscales, i.e., WM, $F(2, 127) = 5.85, p = .004, \eta^2 = .84$; planning, $F(2, 127) = 4.09, p = .019, \eta^2 = .61$; regulation, $F(2, 127) = 10.01, p < .001, \eta^2 = .13$; and inhibition, $F(2, 127) = 4.86, p = .009, \eta^2 = .71$ (Table 1). Significant differences were found between the groups with low and high levels of this PC regarding WM, planning, regulation, and inhibition. A significant difference was also found between the groups with low and medium levels of shared leisure in WM, regulation, and inhibition (Table 1).

Table 1

Descriptive statistics for the recategorized PCP-P dimensions and EFS

	FE	Low		Medium		High		F	Statistics			
		M1	SD	M2	SD	M3	SD		p	η_p^2		
									M1-M2	M1-M3	M2-M3	
Implication School	1	21.18	6.30	19.62	5.41	20.41	7.31	0.42	0.690	0.765	0.996	0.01
	2	9.26	3.00	8.92	2.89	9.21	3.59	0.70	0.465	0.844	0.854	0.00
	3	14.47	4.10	13.74	4.39	13.74	4.42	0.14	0.861	0.996	0.922	0.00
	4	16.63	4.93	16.49	4.60	15.74	4.91	0.47	0.691	0.706	1.000	0.00
Dedication and Orientation	1	21.69	6.32	19.73	6.00	19.60	6.57	1.62	0.295	0.282	0.995	0.02
	2	9.59	2.93	8.78	3.04	8.89	3.47	0.95	0.422	0.550	0.988	0.01
	3	15.09	4.07	13.24	3.56	13.43	5.01	2.79	0.089	0.166	0.980	0.04
	4	17.39	5.35	15.66	3.96	15.57	4.65	2.18	0.089	0.166	0.997	0.03
Shared Leisure	1	22.91	6.87	19.67	5.91	18.61	5.27	5.85	0.042	0.007	0.727	0.84
	2	10.13	3.01	8.87	3.00	8.29	3.15	4.09	0.120	0.018	0.661	0.61
	3	16.15	4.29	13.20	3.63	12.58	4.02	10.01	0.002	0.000	0.780	0.13
	4	18.07	5.23	15.61	4.33	15.18	4.32	4.86	0.045	0.022	0.918	0.71
Assumption of the Father's or mother's role	1	20.86	6.44	22.31	5.86	18.32	6.07	3.97	0.550	0.150	0.025	0.59
	2	9.46	2.97	9.83	3.02	8.05	3.20	3.59	0.852	0.095	0.050	0.54
	3	14.63	3.92	15.46	4.16	11.92	4.12	7.95	0.638	0.007	0.001	1.11
	4	16.77	5.11	17.23	4.59	14.92	4.32	2.53	0.905	0.182	0.121	0.38

Note: 1 = Working Memory; 2 = Planning; 3 = Regulation; 4 = Inhibition.

Assumption of the Role of Father or Mother.

An overall significant effect of this PC on EF was found, Hotelling's $F(8, 246) = 2.10, p = 0.036, \eta^2 = 0.06$. Univariate analysis indicated that there are significant differences regarding WM, $F(2, 127) = 3.97, p = .021, \eta^2 = .59$; planning, $F(2, 127) = 3.59, p = 0.030, \eta^2 = .54$; and regulation, $F(2, 127) = 7.95, p = .001, \eta^2 = 1.11$. No significant difference was observed regarding inhibition, $F(2, 127) = 2.53, p = .083, \eta^2 = 0.38$. Significant differences were found in the EF of WM, planning and regulation between the groups with medium and high levels of this parental competence. A significant difference in regulation was also found between the groups with low and high levels of parental competence (Table 1).

No overall significant effect for the school involvement dimension (Hotelling's $F(8, 246) = .493, p = .860, \eta^2 = .016$) and for the dedication and orientation dimension (Hotelling's $F(8, 246) = .839, p = .569, \eta^2 = .027$) on EF was found.

Effect of Parental Skills on Reading Skills (rs)

Shared Leisure. No overall significant effect was found for this dimension on rs, Hotelling's $F(12, 238) = 1.619, p = .087, \eta^2 = .075$. However, the univariate analysis indicated that there are significant differences in terms of phonological access, $F(2, 125) = 3.658, p = .029, \eta^2 = .055$, global comprehension, $F(2, 125) = 5.792, p = .004, \eta^2 = 0.085$, and in the total of CL $F(2, 125) = 3.776, p = .026, \eta^2 = 0.057$, but not in terms of visual access, $F(2, 125) = 2.522, p = 0.084, \eta^2 = 0.039$, reading accuracy $F(2, 125) = 0.075, p = .928, \eta^2 = .00$, and literal comprehension $F(2, 125) = 1.114, p = .331, \eta^2 = .018$. Significant differences were observed between children with low and high levels of shared leisure in phonological access, between low and medium and medium and high levels in global comprehension, and between medium and high levels in the total reading competence (Table 2).

Table 2

Descriptive statistics for the different recategorized dimensions of PCP-P and RC

		Low		Medium		High			Statistics			
	RC	M1	SD	M2	SD	M3	SD	F	p			η_p^2
									M1-M2	M1-M3	M2-M3	
Implication School	1	38.25	16.43	38.57	19.96	41.01	19.66	0.26	0.996	0.768	0.842	0.00
	2	23.15	9.91	26.44	11.44	23.32	11.23	1.19	0.317	0.997	0.441	0.01
	3	16.91	6.63	16.56	6.93	18.92	4.87	1.48	0.962	0.308	0.260	0.02
	4	40.28	13.51	39.84	13.56	38.13	13.62	0.27	0.987	0.746	0.857	0.00
	5	23.17	10.37	24.05	9.60	23.72	10.90	0.08	0.914	0.968	0.990	0.00
	6	141.78	43.39	145.36	45.23	145.12	46.73	0.09	0.924	0.937	1.000	0.00
Dedication and Orientation	1	36.78	17.58	40.73	19.34	40.65	18.19	0.70	0.560	0.598	1.000	0.01
	2	22.06	11.26	25.56	10.71	25.70	9.69	1.73	0.265	0.264	0.998	0.02
	3	16.50	6.57	16.85	6.39	19.18	5.65	2.10	0.961	0.126	0.249	0.03
	4	38.55	14.64	40.10	13.88	40.55	11.25	0.27	0.850	0.777	0.988	0.00
	5	22.11	10.04	24.76	10.90	24.41	9.71	0.92	0.435	0.559	0.988	0.01
	6	136.02	45.16	147.91	48.37	150.52	37.88	1.38	0.410	0.295	0.965	0.02
Shared Leisure	1	38.45	19.34	35.36	15.35	44.22	19.39	2.52	0.697	0.318	0.071	0.03
	2	21.63	11.88	23.57	10.04	27.81	9.29	3.65	0.656	0.023	0.165	0.05
	3	17.07	6.59	17.41	6.08	17.60	6.46	0.07	0.965	0.925	0.990	0.00
	4	38.37	13.83	38.49	14.16	42.32	12.10	1.11	0.999	0.381	0.403	0.01
	5	21.94	10.85	21.36	8.76	28.12	9.87	5.79	0.957	0.014	0.006	0.08
	6	137.47	48.99	136.20	40.58	159.97	39.98	3.77	0.989	0.054	0.039	0.05

Table 1. Means, standard deviations, and correlations for the variables in the study												
	RC	Low		Medium		High		F	Statistics			
		M1	SD	M2	SD	M3	SD		p			η_p^2
									M1-M2	M1-M3	M2-M3	
Assumption of the Father's or mother's role	1	38.52	15.66	37.44	19.78	41.39	20.49	0.46	0.960	0.739	0.629	0.00
	2	24.13	10.55	21.43	11.07	26.67	10,36	2.21	0.470	0.497	0.093	0.03
	3	16.08	6.61	18.89	4.59	17.75	7.04	2.25	0.101	0.419	0.720	0.03
	4	39.71	13.15	34.90	13.93	43.71	12.42	4.08	0.214	0.323	0.014	0.06
	5	22.19	8.83	21.54	10.34	27.45	11.18	4.11	0.951	0.037	0.034	0.06
	6	140.57	39.99	134.21	46.68	156.99	46.70	2.69	0.782	0.183	0.073	0.04

Note: 1 = Visual Access; 2 = Phonological Access; 3 = Reading Accuracy; 4 = Literal Comprehension; 5 = Global Comprehension; 6 = total Reading Competence. The mean difference is significant at level 0.05.

Assumption of the Role of Father or Mother.

A significant general effect of this dimension was found: Hotelling's $F(12, 238) = 1.862$, $p = 0.040$, $\eta_p^2 = 0.086$. Univariate analysis indicated that there are significant differences regarding literal comprehension $F(2, 125) = 4.080$, $p = 0.019$, $\eta_p^2 = 0.061$ and global comprehension $F(2, 125) = 4.110$, $p = 0.019$, $\eta_p^2 = 0.062$. In all cases, the Eta squared value indicated a medium effect. There were no significant differences regarding visual access $F(2, 125) = 0.467$, $p = 0.628$, $\eta_p^2 = 0.007$, phonological access $F(2, 125) = 2.211$, $p = 0.114$, $\eta_p^2 = 0.034$, reading accuracy $F(2, 125) = 2.254$, $p = 0.109$, $\eta_p^2 = 0.035$, and in the total of RC, $F(2, 125) = 2.695$, $p = 0.071$, $\eta_p^2 = 0.041$. Significant differences were observed between low and high and medium and high levels of this PC regarding global comprehension, and between medium and high levels of literal comprehension (Table 2).

No overall significant effect was found for school implication, Hotelling's $F(12, 238) = 0.011$, $p = 0.439$, $\eta_p^2 = 0.049$ and for dedication and

orientation Hotelling's $F(12, 238) = 0.843$, $p = 0.606$, $\eta_p^2 = 0.041$.

Effect of parental competences on mathematical competences.

Dedication and Orientation. No overall significant effect was found: Hotelling's $F(8, 248) = 1.399$, $p = 0.198$, $\eta_p^2 = 0.043$. However, univariate analyses indicated there were significant differences in numbering $F(2, 128) = 4.050$, $p = 0.020$, $\eta_p^2 = 0.060$ between children with low and high levels and between children with medium and high levels of this PC (Table 3).

No overall significant effect on MC or its different dimension were found for the school involvement dimension, Hotelling's $F(8, 248) = 0.227$, $p = 0.986$, $\eta_p^2 = 0.007$; the shared leisure dimension, Hotelling's $F(8, 248) = 0.893$, $p = 0.523$, $\eta_p^2 = 0.028$; and the assumption of the role of father or mother dimension, Hotelling's $F(8, 248) = 1.457$, $p = 0.174$, $\eta_p^2 = 0.045$.

Table 3

Descriptive statistics for the different recategorized dimensions of PCP-P and MC.

Low				Medium		High		Statistics				
		<i>M1</i>	<i>SD</i>	<i>M2</i>	<i>SD</i>	<i>M3</i>	<i>SD</i>	<i>F</i>	<i>p</i>			η_p^2
									M1-M2	M1-M3	M2-M3	
Implication School	1	27.69	9.95	27.66	9.89	29.03	10.47	0.22	1.000	0.813	0.829	0.00
	2	28.63	7.47	27.85	9.25	28.44	10.35	0.09	0.904	0.995	0.956	0.00
	3	29.49	8.78	27.52	7.71	28.77	9.74	0.60	0.518	0.922	0.813	0.00
	4	20.91	13.72	20.66	14.13	21.79	14.82	0.06	0.996	0.955	0.937	0.00
	5	106.74	29.60	103.69	29.75	108.04	34.25	0.20	0.882	0.979	0.819	0.00

		Low		Medium		High		Statistics				
		<i>M1</i>	<i>SD</i>	<i>M2</i>	<i>SD</i>	<i>M3</i>	<i>SD</i>	<i>F</i>	<i>p</i>			η_p^2
									<i>M1-M2</i>	<i>M1-M3</i>	<i>M2-M3</i>	
Dedication and Orientation	1	26.92	10.17	26.11	10.15	32.02	8.65	4.05	0.916	0.045	0.026	0.06
	2	28.25	7.22	27.60	9.79	29.34	9.85	0.36	0.933	0.836	0.670	0.00
	3	28.93	8.69	27.95	8.72	29.22	8.93	0.23	0.851	0.987	0.804	0.00
	4	19.32	14.11	22.47	15.43	22.14	12.16	0.72	0.525	0.625	0.994	0.01
	5	103.44	29.61	104.16	34.07	112.73	28.08	1.10	0.993	0.344	0.447	0.01
Shared Leisure	1	26.76	10.89	27.64	9.83	30.05	9.01	1.18	0.906	0.293	0.511	0.01
	2	26.58	7.88	27.87	7.83	31.05	10.35	2.87	0.754	0.052	0.215	0.04
	3	28.59	8.38	28.24	9.60	29.41	8.10	0.19	0.980	0.903	0.813	0.00
	4	18.47	13.65	20.91	12.32	24.38	16.02	1.86	0.677	0.134	0.492	0.02
	5	100.42	28.52	104.67	29.78	114.91	33.19	2.45	0.778	0.079	0.274	0.03
Assumption of the Father's or mother's role	1	27.88	9.15	25.66	12.05	30.51	8.73	2.22	0.547	0.416	0.093	0.03
	2	29.17	8.35	26.19	8.68	29.13	9.35	1.49	0.249	1.000	0.322	0.02
	3	27.97	9.03	27.98	7.53	30.48	9.21	1.12	1.000	0.355	0.435	0.01
	4	19.42	11.83	20.68	15.05	23.89	15.92	1.18	0.907	0.283	0.587	0.01
	5	104.45	28.15	100.52	31.39	114.02	32.94	1.96	0.818	0.294	0.142	0.03

Note: 1 = Numbering; 2 = Calculation; 3 = Information and Chance; 4 = Problem Solving; 5 = total Mathematical Competence. The mean difference is significant at level 0.05.

Structural equation models

Finally, different models were tested to examine the relationship between parenting skills, EFS, and academic skills. First, the effect of PCs on EFS was examined. This model showed a good fit to the empirical data, indicating that PC predicts EF from the parents' perspective ($-.28, p = .010$). Model 2 (M2), which analyzes the contribution of PCs to academic competences, showed that PCs predict both Mathematical Competences (MC) ($.25, p = .016$) and Reading Skills (RS) ($.23, p = .026$). However, the model did not show a satisfactory

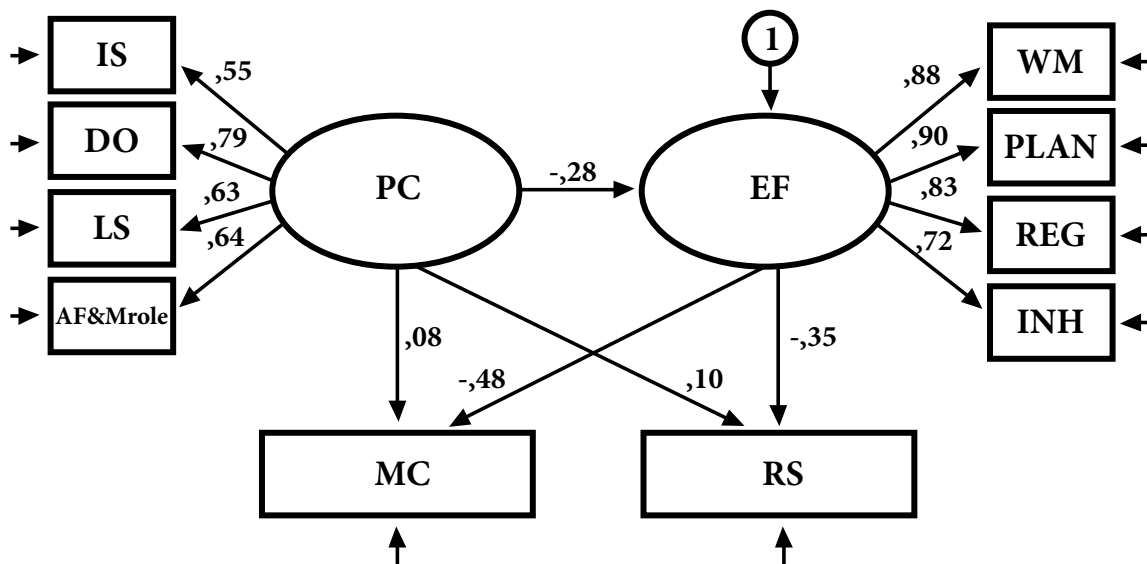
fit to the data. In Model 3, we analyze the relationship between FE and academic competences. This model showed a good fit to the empirical data, indicating that EF predicts both MC ($-.50, p < .001$) and RS ($-.38, p < .001$). Finally, Model 4 (M4), that analyzes the direct effects of PCs on EFS and indirect effects on academic competences through EFS, showed the best fit to the data (see Table 4 and Figure 1). These results suggest that PCs have a direct effect on EF and indirect effects on academic competencies through EF.

Table 4
Model Fit Indices

Model	χ^2	df	<i>p</i>	χ^2/df	NFI	CFI	RMSEA
Model 1	28.508	19	.074	1.50	.94	.98	.063
Model 2	35.134	9	.000	3.90	.77	.81	.151
Model 3	15.332	8	.053	1.92	.96	.98	.085
Model 4	31.987	31	.417	1.03	.94	1.00	.016

Note: M1 = contribution of parenting skills to EF; M2 = contribution of parenting skills to reading and math skills; M3 = contribution of EF to reading and math skills; M4 = direct effects of PC on EF and indirect effects of PC on academic skills through EF.

Figure 1. Direct effects of parental competences on EF and indirect effects on academic competences through EF.



Discussion

This work aimed to analyze the effect of parental skills on academic competences in school-age children and to examine the mediating role of EF in the relationship between parental skills and academic competences. In the first place, it found a significant effect of parental competences on EF, with a marked discrepancy between children with a higher degree of parental competences and those who presented lesser competences. Particularly, we observed that the shared leisure dimension (i.e., perception of the commitment of parents to collaborate with their children so that they learn to know and integrate into the environment and the time of quality shared) and the assumption of the role of father or mother dimension (i.e., perception of adaptation to parental function after the birth of children), had a positive impact on children's EF behavior. Our findings suggest that higher self-perceived parental competences favor children's EF.

These results also agree with earlier research that indicates that parental support, the establishment of limits, and an adequate parental sensitivity and positive control are linked to a greater

WM capacity, planning, inhibition, monitoring, attentional shift, and emotional control and self-regulation (Arcos & Flores, 2017). Likewise, a recent study found that protective and formative parental competences were related to a greater EF in children (Bernal-Ruiz et al., 2020). In particular, the authors found that knowledge, attitudes, and everyday parenting practices that organize the exploration and learning environment (i.e., formative competencies) predict planning, problem-solving, and executive fluency in children (Bernal Ruiz et al., 2020). Consistently, González (2013) found that situations of abandonment and abuse (i.e., indicators of low parental competences) could cause permanent damage to the orbitofrontal cortex, affecting the behaviors of regulation and social adjustment. Consequently, we could confirm hypothesis 1 of the study: that parental competences perceived by parents have a positive and significant effect on children's EF.

Regarding the effect of parental skills on academic competences, this study found a significant effect of the shared leisure dimension on phonological access, global comprehension, and total RC, and in the dimension assumption of

the father's or mother's role on RC, especially on literal comprehension and global comprehension. Similarly, Guarneros and Vega (2014) observed that exposure to a diverse vocabulary is among the factors that favor the development of oral language in preschool children. According to their research, the use of different and new words by parents and teachers prompts children to include more vocabulary into their conversations. Lipina and Segretin (2015) and Posner and Rothbart (2018) also highlight the importance of the role of parents, both for the acquisition of the prerequisites of reading and reading motivation.

Considering the theoretical background and the results of this study, one could argue that the above-mentioned parental dimensions refer to a dialogic interaction between parents and children, hence their positive impact on the linguistic competence of children. According to Weiss (2014), positive relationships between parents and children and the involvement of parents in their children's school activities have a positive effect on their school performance. Regarding the effect of PC perceived by parents on MC, our results showed that the dedication and orientation dimension significantly affects numbering tests. Thus, it is possible that parents who are dedicated to clarifying doubts and guiding the resolution of problems favor their children's ability to apply knowledge of numbers, measurements, and magnitudes. The results agree with those of Epstein (2013), who found that the perceptions that mothers and fathers have about their children's mathematical abilities relate to the academic results that they have in Mathematics. In this line, Bucci, Brumariu, Diaconu-Gherasim, and Hunter (2021) found that maternal parenting skills (i.e., maternal achievement-oriented control and maternal monitoring) and maternal teaching strategies relate to children's academic competence in middle childhood. Particularly, the authors found that mothers who use less achievement-oriented control have children with higher academic competence. However, no incidence of parental competencies was found on the other MC skills related

to calculating and solving problems. Therefore, we could partially confirm hypothesis 2 of the study: that parental competences have a positive effect on the academic competences of children.

Finally, when examining the relationship among variables by means of structural equation model techniques, we observed that parental competences predict EF (i.e., Model 1) and that EFS predict academic competences (i.e., Model 3). However, M2, that analyzes the relationship between parental competences and academic skills, did not show a satisfactory fit to the empirical data. Based on these findings, a fourth model (M4) was tested to examine the mediating role of EFS in the relationship between parenting skills and academic competences. The results show that EFS play a mediating role between PC and both academic competences, and suggest that PCs influence the development of EFS (Vargas-Rubilar & Arán-Filippetti, 2014), which in turn promote the acquisition of academic skills (Pérez & Beltrán, 2014). The mediating role of EFS was also revealed by Bernal Ruiz et al. (2018), who found that certain PCs affect the ability of children to regulate their behavior (which implies the use of EF) and these would be related to optimal performance in mathematics and language. Similarly, Bernal Ruiz et al. (2018) showed that children whose parents showed greater protective, reflective, and formative skills, had more developed EF, as well as better performance in mathematics and language.

The relationship between EF and academic skills has also been demonstrated in studies that assess EF through laboratory tasks. Indeed, Arán-Filippetti and López (2016) found that WM and spontaneous cognitive flexibility (i.e., verbal fluency) would be the main executive processes that explain, in part, individual performance variations in reading comprehension tasks. Likewise, Cruz and Tomasini (2005), when analyzing the impact of self-regulation processes on reading comprehension, found that during this task the children create a purpose, think, review their plan, supervise it, and motivate themselves to execute

it. Stelzer and Cervigni (2011) also highlighted the existence of a link between certain executive processes and performance in different curricular domains. Therefore, our findings offer additional support to the hypothesis that executive processes play a central role in learning, even when they are assessed at the behavioral level from the parents' perspective. Based on these results, we can confirm hypothesis 3: that EFS mediate the relationship between parental skills and academic competences.

In summary, our results indicate that appropriating literacy and math abilities requires a set of affective resources, which are closely related to parenting skills, as well as cognitive resources, among which EFS stand out (see Blair & Razza, 2007; Geary et al., 2007; Roselli et al., 2008). Earlier studies (Basuela, 2014; Cervigni et al., 2012; Fernández, 1987; Paín, 1975; Posner & Rothbart, 2018) have also shown that the competences of those who perform parental functions have a significant impact on the development and maturation of brain functions, as well as on learning possibilities, especially at school age.

Conclusions

This study shows that some dimensions of parental competences are positively related to: (a) EFS in general and/or with some of them in particular, and (b) the total RC and/or some of its abilities. Besides, some of them are related to different aspects of MC. Finally, we found that EFS play a mediating role in the relationship between parental skills and academic competences.

These results have theoretical, clinical, and psychoeducational implications. Theoretical, since they provide empirical data regarding the relevance of PCs for the development of EF and for academic task performance, as well as concerning the impact of EF on RS and MC. Clinical, because our results bring forwards the importance of early detection and approach to families in order to strengthen EFS and perform differential diagnoses. Finally, they constitute the basis for proposing interventions in parental strengthening programs during childhood.

Other studies have suggested that EF ratings assessed by parents and teachers are important predictors of the development of academic competencies at school age (Risso et al., 2015). Taking this into consideration, our study is limited, on the one hand, by not having the results of performance-based measures of EF. These indicators would have provided greater richness and objectivity to the investigation. Hence, further studies would benefit from analyzing the joint contribution of the EF from both perspectives (cognitive vs. behavioral) on children's academic task performance to examine which measure has a higher predictive level. On the other hand, parental competences were only assessed from the parent's perspective. In this regard, future studies would benefit from analyzing the relationship among variables by also evaluating the parental competences perceived by children, given that earlier research has emphasized that children's perceptions or interpretations of parental attitudes and behaviors have an important impact on their psychosocial development (Richaud, Lemos, & Mesurado, 2011; Vargas-Rubilar et al., 2020). Finally, another limitation is related to the geographical representativeness of the sample, since the study only included children from Argentina with a typical development. This hinders the generalizability of the results to children from other Spanish-speaking countries or to samples with atypical development.

In summary, our results show the impact of PC on different structural dimensions of the learner and the link between EF and the academic skills of reading and calculation. Considering that EFS involve a series of skills that allow "doing" with what has been learned, they constitute an essential factor for meaningful learning. The results also visualize the centrality of PC on children's EF and in their ability to regulate their behavior to learn.

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doi: <https://doi.org/10.15446/rcp.v32n1.98961>

Historical Development of Political-Critical Thinking in Colombian Psychology

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How to cite this article: Cudina, J. N., Ossa, J. C., Millán, J. D., López-López, W., & Tateo, L. (2023). Historical development of political-critical thinking in Colombian Psychology. *Revista Colombiana de Psicología*, 32(1), 29-47. <https://doi.org/10.15446/rcp.v32n1.98961>

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SCIENTIFIC RESEARCH ARTICLE

RECEIVED: OCTOBER 11, 2021—ACCEPTED: JULY 14, 2022

Abstract

The study traces the historical elements that have influenced the development of political-critical thinking in Colombian Psychology. Four historical periods have been identified and discussed: The intellectual colonialism of Colombian Psychology (1947-1960); the social Psychiatry in the years of *La comisión* [The commission] (1961-1980); the community Psychology and the coexistence (1980-1991); and the psychosocial studies after recent peace processes between government and armed groups (1991-2018). Colombian political Psychology did not follow a homogeneous and linear development. The reality experienced by Colombians during more than five decades of armed conflict required Psychology to abandon the direct paths of politics and opt for psychosocial studies that promise to be the most radical heirs of a generation of Latin American critical thinking as represented by Ignacio Martín-Baró, Maritza Montero and Silvia Lane.

Keywords: Colombia, critical Psychology, history of Psychology, political Psychology, social Psychology.

Desarrollo Histórico del Pensamiento Político-Crítico en la Psicología Colombiana

Resumen

El estudio rastrea los elementos históricos que han influido en el desarrollo del pensamiento político-crítico en la psicología colombiana. Se identifican y discuten cuatro periodos históricos: el colonialismo intelectual de la psicología colombiana (1947-1960); la psiquiatría social en los años de La Comisión (1961-1980); la psicología comunitaria y la convivencia (1980-1991); y, finalmente, los estudios psicosociales tras los recientes procesos de paz entre el Gobierno y los grupos armados (1991-2018). La psicología política colombiana no siguió un desarrollo homogéneo y lineal. La realidad vivida por los colombianos durante más de cinco décadas de conflicto armado exigió que la psicología abandonara los caminos directos de la política y optara por los estudios psicosociales que prometen ser los herederos más radicales de una generación de pensamiento crítico latinoamericano representada por Ignacio Martín-Baró, Maritza Montero y Silvia Lane.

Palabras clave: psicología política, psicología social, psicología crítica, historia de la psicología, Colombia.

Introduction: The Historical Context

COLOMBIA IS going through a crucial historical moment in the aftermaths of the Peace Agreements Process (Gutiérrez, 2020; Segura & Mechoulam, 2017). The peace process in Colombia is an attempt to end the internal armed conflict that the country has lived through for more than five decades with one of the oldest guerrilla groups in the world: *Fuerzas Armadas Revolucionarias de Colombia-Ejército del Pueblo* (FARC-EP) [Revolutionary Armed Forces of Colombia-People's Army] (Acosta-Olaya, 2020). Since its creation in 1964 by farmer Pedro Antonio Marín (1964-2008) alias "Manuel Marulanda Vélez" or "Tirofijo", the history of Colombia has witnessed the most atrocious crimes that have been detrimental to the lives and human rights of thousands of Colombians¹.

The phenomenon of violence in Colombia is an extremely complex aspect. Diverse actors that have participated in the changes and transformations of the country's internal armed conflict, from its beginning in the period of *La Violencia* [The Violence] in 1948 until today. They converge in a central point: The emergence of an unusual violence against the civilian population, that along the systematic use of the media have entered into the country's internal armed conflict:

psychological warfare that hides the truth of the facts, maximizes the evil of the enemy and the goodness of those who represent the state, and in turn manipulates the population to accept the liquidation of those who oppose the *statu quo*². (Quesada-Vanegas, 2006, p. 26).

- 1 Although the peace process carried out by the government of Juan Manuel Santos was only with the FARC-EP, it should be mentioned that the history of the conflict is not only with the FARC but also with several armed groups such as the ELN, EPL, M19, as well as criminal and paramilitary groups.
- 2 Original Spanish "una guerra psicológica que oculta la verdad de los hechos maximiza la maldad del enemigo y la bondad de quienes representan el Estado, y su turno manipula a la población para aceptar la liquidación de quienes se oponen al statu quo" translated by the authors.

Since the peace dialogues between the Colombian government, led by Juan Manuel Santos, and the FARC-EP, that began in 2012, the Colombian people have been living a situation of intense political polarization (Villa-Gómez et al., 2007). The most acute moment was achieved after the peace plebiscite of October 2nd, 2016, that gave the Colombian people the possibility of ending a conflict of more than 50 years and with more than 220,000 victims (Centro Nacional de Memoria Histórica, 2009). The 51 % of the Colombian population voted against the peace agreements. We think that the Colombian people which we claim have been victims of a media strategy (Dajer, 2021; Prager & Hameleers, 2021) that caused the negative result.

Colombia was caught in a political polarization between those who supported the peace process and those who opposed to it. This polarization has been exploited by right-wing political sectors, who have come back to power through a strategy based on fear. It is not the first time that Colombia faces a similar situation. Since the 19th Century, the war between liberals and conservatives significantly delayed the construction of the Nation State. The same is happening now: The political polarization and sabotage by the National Government and its Democratic Center³ has delayed the processes of reparation for the victims of the civil war, the psychosocial well-being, and the construction of a common historical memory.

This is just one example of the many cases in Colombian history that have led to another complex aspect of the structural escalation of violence in the country (Ríos & González, 2021). This is the role of a violence that is exercised with the aim of generating gaps within social and class relations among civil society. In many cases, violence has been an instrument used to foment social tensions,

- 3 The Democratic Center [El Centro Democrático] is a Colombian political party founded in 2013 by ex-President Álvaro Uribe Vélez. Its origin is based on five pillars: democratic security, investor confidence, social cohesion, decentralized austere state, and popular dialogue, and in turn, it has become the political party of the extreme right in the country (Vargas, 2018; Durán-Núñez, 2018).

to forge ideologized symbolic contents in which beliefs and customs for public and private life are constructed (Barrero-Cuéllar, 2006).

In this context, the Colombian psychologists started to take small steps towards the development of psychosocial welfare, by acquiring a strategic role in proposals as the PAPSIVI (Program of Psychosocial Care and Comprehensive Health for Victims) under Law 1448 (Rettberg, 2015; Campo-Arias et al., 2017). However, the history of Colombian Psychology shows that the discipline lagged behind the social and political issues of the country for long time (Aguilar, et al., 2021).

Latin American Political Psychology. Starting Point

In general terms, the history of Latin American political Psychology has been mainly represented by critical psychologists as Maritza Montero, Ignacio Martín-Baró, Miguel Salazar, Silvia Lane, among others. The political and critical project of Latin American social Psychology (Montero, 1991; 1993) had its most decisive expression after the First Latin American Seminar of Social Psychology, held in 1975 in Caracas (Montero, 1986; 1987) and the foundation of the *Associação Brasileira de Psicologia Social* (Brazilian Association of Social Psychology, ABRAPSO) in 1980 (Caycho, 2017; Jacó-Vilela & Sato, 2012).

The intellectual colonialism was one of the elements that marginalized Colombia from playing a visible role in the Latin American project of political Psychology (Díaz-Gómez, 2007; Díaz-Gómez et al., 2015). Colombian Psychology delayed the establishment of a social Psychology chair in the curricula of the faculties and programs of the country for a long time. Thus, the critical orientation that was being developed in the other Latin American countries was almost absent in Colombia. This study reviews four historical moments: the intellectual colonialism of Colombian Psychology (1947-1960), the social Psychiatry in the years of *La Comisión* [The commission] (1961-1980), the community Psychology and the coexistence (1980-1991) and, finally, the psychosocial

studies, including the adoption of the 2011 victims' law and the peace process with the FARC (2012-2018).

In the last section, we will critically review the results the PAPSIVI psychosocial care program over the last six years, and the Group-Level Emotional Recovery Strategy (ERE-G), after three years of enforcement of the Law 1448. We will try to determine the political and ethical challenges that Colombian psychologists must face in the future. The discussion is mainly based on the reports collected from the victims' consultation (Mesa Psicosocial); on the reports by the ombudsman to the Congress of the Republic; and by the Historical Memory Center (Capri & Swartz, 2018).

Applied Psychology in Colombia: Intellectual Colonization

The establishment of Psychology in Latin America originated in a heterogeneous form by the encounter of multiple disciplines. A first wave of European psychologists migrated to Latin America⁴. They played an important role in the development of the discipline in the continent (Alarcón, 1997) and in the founding of the first applied Psychology laboratories in Argentina, Chile, Brazil, Peru, and Mexico (Alarcón, 1980, Klappenbach & Pavesi, 1994, Carrascoza & Manero-Brito, 2009).

The laboratories established a tradition of applied Psychology in Latin American countries (Jacó-Vilela, 2007). The Psychology of the continent was quickly irradiated by Spanish psychologists, professors, pedagogues, and philosophers who belonged to the experimental tradition. Among them are: Mercedes Rodrigo (1891-1982), Francisco Giner de los Ríos (1839-1915), Julián Besteiro (1870-1940), Urbano González Serrano (1848-1904), and Dr. Luis Simarro (1851-1921) (Klappenbach & Pavesi, 1994). Colombian Psychology counted

4 During the 29th International Congress of Applied Psychology (ICAP, 2018) the Focus of Lecture Symposium was held: European Psychologists Emigrant to Latin America by members of Division 18: History of Applied Psychology where the role played by European psychologists in the configuration of Latin American Psychology.

from the beginning with foreign professors who deeply enriched the disciplinary knowledge of the profession. Horacio Rimoldi (Argentina), Oswaldo Robles, Rafael Núñez and Concepción Zúñiga (Mexico), Enrique Solari (Peru), and José Mallart (Spain) were among those (Villar-Gaviria, 1965).

The first institute of applied Psychology was founded in Colombia on November 20th, 1947 (Ardila, 1973). This foundational event in Colombian Psychology was granted by the work of Mercedes Rodrigo, who arrived in the country in 1939 to carry out the selection processes at the Universidad Nacional (Ardila, 1998). Mercedes Rodrigo made possible the independent selection processes of the University and created from it the foundation of the Institute of Applied Psychology (Jaraba-Barrios, 2014). Rodrigo's position holds an important political responsibility, since she oversaw the university's admission processes. Colombia faced deep conflicts between conservatives and liberals, that made institutions as the Universidad Nacional subject to political pressure. To that extent, the decisions made by the Spanish psychologist were constantly monitored and interpreted as manifestations of political preferences.

The position occupied by Mercedes Rodrigo was so coveted that, according to some narratives, her exile in Puerto Rico may occur at the direct request of the conservative president Laureano Gómez who had seen in her a "professed communist" (Matiz, 1998). With the departure of Professor Rodrigo from the country, the psychiatrist Hernán Vergara Delgado was appointed at the program's direction (Matiz, 1997). Hernán Vergara carried out a reform to modify the curriculum of the Institute of Applied Psychology. After Vergara's arrival, a total reorganization of the professors' staff took place, including more physicians, mostly psychiatrists.

The former group of teachers at the Institute (1940-1948) interpreted Psychology as an experimental and applied science. Among other things, it achieved for the first time the adaptation of psycho-technical tests to the characteristics of the national population. Since Vergara's leadership, a kind of

hegemony of psychiatric thought was established in the Institute, that would later become Faculty in 1957, during the deanship of the psychologist Beatriz de la Vega. In 1964, after the arrival of the rector José Félix Patiño, a reform was made in the curriculum, in which "a basic one-year program was prepared in common for the three careers: Psychology, Sociology and social work" (Villar-Gaviria, 1965, p. 11).

With this reform, the psychologists' academic education and professional training involved sociological and humanistic subjects. The humanistic-psychoanalytic Psychiatry deeply influenced the training in Psychology for about two decades, having Erich Fromm and some post-Freudians as its most influential authors. From that, Psychology sought to meet the demands of some public and private institutions of the country's clinical, educational, and industrial sectors (Mankeliunas & Restrepo, 1973, Domínguez-Blanco & Duque, 1999, López-Parra & Urrego-Arango, 2012).

Psychology at the hand of Psychiatry was framed in a current of thought of social Psychiatry quite revolutionary for the time, that would later influence by the antipsychiatry of Laing, Szasz or Basaglia (Nesbitt-Larking, 2014). The hegemony of social Psychiatry at the School of Psychology at the Universidad Nacional had many detractors because it somehow involved deepening the Psychology's condition of vassalage and dependence from Psychiatry and medicine.

Rubén Ardila, historian of Colombian Psychology, was one of the psychologists who opposed the hegemony of social Psychiatry at the School of Psychology, leading to the implementation of a five-year plan that sought to strengthen Psychology as a profession. In 1975 Rubén Ardila stated the following: "During this period 1970-1975 Colombian Psychology matured, surpassed, and opened new areas of work [...] in that plan it must be included that psychotherapy is a field of adequately trained psychologist without requiring supervision of the psychiatrist" (Ardila, 1975, p. 436)⁵.

5 Original Spanish: "Durante este periodo 1970-1975 la psicología colombiana maduró, superó su estancamiento

The five-year plan, launched in 1970, lasted until 1975 and led Psychology to become independent from other disciplines and fields of knowledge. Many of the social Psychiatry-oriented works were developed in the 60s. Also, the sociological orientation had a short life, leading the Colombian social Psychiatry Psychology to adhere to the experimental and applied Psychology. In 1965, Álvaro Villar Gaviria –in one of the first historical compendia of Psychology Colombia writes:

I exclude in advance Psychology when the mere speculation is reduced without the systematic use of a methodology, i. e., as a branch of philosophy no other purpose than speculation without practical applications, without direct observation, experimentation, and regardless of the current, biological and mathematical foundations⁶. (Villar-Gaviria, 1965, p. 7)

This orientation determined the future of the discipline and made not very visible the role of Colombian psychologists in the development of the Latin American project of social Psychology. The experimental and applied focus delayed for more than three decades the convergence of Psychology with other disciplines, as Fals-Borda's Sociology (Carrillo, 2020; Montero, 2008), that produced the school of social Psychology of coexistence at the Pontificia Universidad Javeriana and Universidad del Valle (Univalle) in the 1980s. One of the possible reasons for this absence, as pointed out by Álvaro Díaz-Gómez (2007), was the intellectual colonialism exerted by the North American and European psychological literature.

y abrió nuevas puertas de trabajo [...] en ese plan se debe incluir que la psicoterapia individual es un campo del psicólogo adecuadamente entrenado, sin que se requiera supervisión del psiquiatra”, translated by the authors.

- 6 Original Spanish: “Excluyo de antemano la psicología cuándo ésta se reduce a la mera especulación sin el uso sistemático de una metodología, es decir, como una rama de la filosofía sin otras finalidades que la elucubración sin aplicaciones prácticas, sin observación directa, experimentación, y con prescindencia de los basamentos actuales, biológicos y matemáticos”, translation by the authors.

The Commission: Social Psychiatry and the Sociology of Fals-Borda (1955-1980)

In 1986, Orlando Fals Borda published a text in which he compiled the names of intellectuals that belonged to the second wave of independent intellectuals in Colombia, organized by areas of knowledge, who were the heirs of the “generation of violence” (Fals-Borda, 1987). In the list of the second wave of independent intellectuals, in the field of social Psychology, Fals Borda acknowledged the work of two social psychoanalysts directly involved in the creation of the Institute of Psychology at the Universidad Nacional: The psychiatrists and psychoanalysts Alvaro Villar Gaviria and José Gutiérrez (Ardila, 1978).

Like Orlando Fals-Borda, both Villar Gaviria and Gutiérrez belonged to the National Commission Investigating the Causes and Situations of Violence in the country (henceforth the Commission) created during the time of the Frente Nacional (National Front), that lasted from 1958-1974. The Frente Nacional was a political agreement between Conservatives and Liberals that consisted of “the equitable distribution of governmental power between the liberal and conservative elites” (Moreno-Parra, 2018; p. 170) with the purpose of ending the era of violence or acute conflict (1948-1954) that produced more than 300,000 deaths (see, Guzmán-Campos et al., 2010). The Commission was the first political institution investigating, documenting, and collecting information that allowed determining the causes of bi-partisan violence (Jaramillo-Marín, 2012).

Álvaro Villar Gaviria was a doctor graduated from the Universidad Nacional and specialized in Psychiatry, who would opt for psychoanalysis. In 1953, according to Rubén Ardila (1998), he was part of the first staff of the Center for Psychology at the Universidad Nacional of Colombia. From 1962 to 1966, he was dean of the School of Psychology at the Universidad Nacional. In 1978, he published a book titled *Psychology and Social Classes in Colombia* that was constituted one of the most significant works of social Psychology

in Colombia (Villar-Gaviria, 1978, Arango-Cálad, 2012). The work of Álvaro Villar very early diverges from the orthodox clinical psychoanalysis that was professed in the Colombian Psychoanalytic Association. For decades he focused on the study of a more sociological approach to Colombian culture (see Lizarazo et al., 1964).

José Gutiérrez, also a trained doctor graduated from the Universidad Nacional, was committed to political causes from a young age. He was a member of the Communist Party and assiduous follower of Jorge Eliécer Gaitán. When Gaitán was murdered in 1948, Gutiérrez decided to continue his medical studies in France, especially in existential and phenomenological philosophy (Uribe-Tobón, 2015). After his journey to France, Gutiérrez returned to Colombia. In 1961, he wrote the first book on political Psychology in Latin America, *From the pseudo-aristocracy to authenticity: Colombian social Psychology* that would lay the foundations for his next work of 1961, *The Colombian rebellion: Psychological observations on political news* and the important work *Non-violence in the Colombian transformation* in 1964 (Gutiérrez, 1961; 1964).

The works of José Gutiérrez and Álvaro Villar soon became references for Marxist left intellectual circles. The same time, those circles saw in the psychoanalysis a tool for the emancipation from the chains unconsciously rooted in our culture. The work of both social psychiatrists' psychoanalysts was known by Orlando Fals-Borda whom we consider as the Colombian intellectual with the greatest recognition from the community of psychologists, especially by Ignacio Martín-Baró and Maritza Montero.

The book *Peasant Society in the Colombian Andes: A Sociological Study of Saucio* published by Orlando Fals Borda in 1955, based on the ethnological tradition of Lévi-Strauss, was one of the first studies of the ethos of peasants in Latin America (Fals-Borda, 1955a). The work of Fals-Borda is undoubtedly a precedent of community Psychology. He found that the Colombian peasant's society is a result of a "cultural conditioning promoted

by economic adversities, political calamities, by certain religious attitudes and by the crystallization of ignorance" had resigned all possibility of change of himself and of his immediate reality (Fals-Borda, 1955b, p. 80).

In a community work with the peasants of Boyacá, he found that two of the elements from the colonial legacy that determined their political behavior were passivity and agrocentrism: "The traditional *passivity and agrocentrism* that is transmitted as a cultural heritage should give way to a constructive and streamlined production. It is necessary to vary certain passive attitudes based on the old type of agriculture that is practiced" (Fals Borda, 2009, p. 51)⁷.

The works of Fals-Borda were rich in descriptions of the daily life of the peasants. They also outlined the conditions that can lead to a revolutionary action or to the intensification of violence in the countryside, generated by the conflict between conservatives and liberals. Fals-Borda was one of the first academics to study the historical-cultural processes that determine the development of determined political attitudes as popular resistance and the cultural and physical survival of the exploited classes (Fals-Borda, 2002).

In the first issues of the *Revista Colombiana de Psicología*, two articles by Fals-Borda were published, outlining what he called *Psycho-Sociology* (Fals-Borda, 1955c). Psycho-Sociology was defined as the objective analysis of the social reality and sought to learn to work with the peasants and not against them (Fals-Borda, 1955c). Fals-Borda, together with the Catholic priest Germán Guzmán Campos and the sociologist Eduardo Umaña, published the most invaluable and historical work during the time of the commission in 1964 titled *La violencia en Colombia*. For a long time, it was the

7 Original Spanish, "la tradicional *pasividad y agrocentrismo* que se transmite como herencia cultural debería dar paso a una constructiva y a una producción racionalizada. Es necesario que varíen ciertas actitudes pasivas que tienen como base el tipo antiguo de agricultura que se practica", translation by the authors.

only study that presented a rigorous systematization of data, dates, and stories of victims during the most acute period of bipartisan violence in Colombian cities and countryside. This characteristic made it an ostracized document and its authors were considered opponents by those responsible for triggering such bloodshed. The work was almost ignored by the psychologists: A fact proved by the absence of citations in scientific journals or research books published by the different institutes or faculties of Psychology of the country.

Nevertheless, the mid-1980s was for sure an important milestone for the understanding of violence in Colombia as a structural phenomenon in the country's civil life. The emergence of various outlaw actors, including paramilitary groups, drug cartels and guerrillas, forerun an imminent socio-political crisis, fueled by terror and barbarism (Legrand, 2003; Richani, 2013). In view of this situation, it was necessary for the psychologists' guild to make a statement on the Colombian social reality. It is no coincidence that the topic of the XVII Colombian Congress of Psychology, held in 1988 in the city of Barranquilla, was: "Towards a Psychology for Colombian society" (Alzate & Arango, 2008).

The slogan clearly calls Colombian Psychology to become a conscious practice of social reality, that would get involved in addressing the phenomenon of violence and its ravages. The main advocate for this call was Ignacio Martín Baró in his keynote: "Towards a politics of Psychology" (Martín-Baró, 1986; 1988). The call to cement a project and think a discipline at the service of Colombian society implied three essential challenges: To recover historical memory; to de-ideologize common sense; and to strengthen popular virtues (Martín-Baró, 1989).

This meeting provoked a debate and somehow led the Colombian academic community of psychologists to think about a horizon where Psychology as a profession would achieve an active status in society. For the first time, Psychology was challenged to mind not only about its contribution to help solve the problems of the country's social structure, but also about the impact of

the psychologist's work in the configuration of society. From the 1990's onwards, the approach to the issues of violence facts in Colombia began to be included in the psychological research agendas (Sacipa-Rodríguez & Montero, 2014).

Community Psychology and Coexistence

In the early 1980's, in Colombia, Gerardo Marín produced interesting works in social Psychology that have been considered as the first works of political Psychology (Molina & Rivera, 2012). Gerardo Marín was also one of the first Colombian psychologists to talk about community Psychology. However, his work of 1973 on measuring dogmatic attitudes and Machiavellian are just examples of an experimental social Psychology applied to the study of political attitudes (Marín, 1976). He does not completely distance himself from applied social Psychology, as demonstrated by his definition of community Psychology, "Community Social Psychology, although incipient and therefore bad defined, shares with the Applied Social Psychology the emphasis on obtaining scientific data in a natural environment" (Marín, 1980, p. 173).

Gerardo Marín glimpsed some elements of psychosocial intervention and defined the community social psychologist as an agent of change that aims to "produce enough details available to evaluate the characteristics of the problem of how the community perceives and indicate possible intervention guidelines" (Marín, 1980, p. 175). The legacy of professor Marín, along with the scholarship of Ignacio Martín-Baró in the years 1977-1979, made possible the birth of an academic community of social Psychology in the Pontificia Universidad Javeriana from 1985. This led to the opening of the master's degree in community studies directed by Ángela María Estrada until 1998 (See Molina & Rivera, 2012).

During the 1980's, in the Universidad del Valle in Cali, a school of community Psychology oriented to psychosocial intervention was established, in response to the intensification of the armed conflict in the country and to the wave of displacement of hundred victims following the armed groups' violent

actions, which hit cities throughout the Southwest (departments of Valle del Cauca, Cauca, Nariño, and Putumayo). The displaced victims settled in a disorganized way in the suburbs (so-called invasions) and poor neighborhoods of capital cities as Cali (capital of Valle del Cauca), that increased the rates of violence, poverty, and re-victimization (Arango-Cálad, 2006).

In 1976, the Department of Psychology and the Bachelor's Degree in Counseling Psychology at the *Universidad del Valle* counted on the advice of the North American psychologist Forrest Tyler to develop a community-oriented curriculum that allowed teachers and students to become aware of the difficult situation in the region. At that time, community Psychology seminars became the backbone of professional training. Precisely during that period, many dissertations and internships were oriented towards community Psychology (Alzate & Arango, 2008). Unfortunately, as Carlos Arango states: "Although there were significant developments in community Psychology, the whole of the teaching staff was not appearing to be committed to a community approach in Psychology" (Arango-Cálad, 2012, p. 87)⁸.

Although the staff had a sociological theoretical ground, it was often detached from social practice. It became evident when the social psychologists of the country were called to participate in supporting the victims of the Armero catastrophe in 1986⁹. According to Mejía, Barrero and Jiménez, as reported by Carlos Arango-Cálad: "The natural disaster of Armero meant a whole ethical confrontation in front of the task of the psychologist, because there was evidenced the contradiction between the theories brought

from the outside and the specific realities that were lived here" (Arango-Cálad, 2012)¹⁰.

In 1994, as result of the little interest on the part of the teaching staff in carrying out research of the community line, at the Institute of Psychology of the Universidad del Valle there was no consolidated reference to community Psychology school for Latin America. The major achievement of community Psychology in the 1980s was the realization in 1981 of the First Encounter of Community Psychology with advice from the Institute of Psychology of Univalle and professor José Amar Amar (Arango-Cálad, 2012).

From the work with popular sectors of Cali, Colombia, the proposal of a community Psychology emerged striving for the construction of a peace culture through educational strategies and dialogues between criminal gangs, families, community, and leaders to encourage coexistence, democracy, and citizen's participation (Arango-Cálad, 2001).

The research-action-participant method of Fals-Borda was the beacon of the work carried out within the framework of the Psychology of coexistence held at the Institute of Psychology in Univalle. In the words of one of its founders Carlos Arango-Cálad:

participatory-action research was used as a strategy to build coexistence with thirty leaders of a popular neighborhood. The daily life and its cycles were characterized, the relations of coexistence, the psychosocial processes and the community projects for its transformation and strengthening. (Arango-Cálad, 2001, p. 79)

This perspective attributes a conception of the subject as a function of the specificity of thought and flexible acting in which acts occur in the framework of an infinite number of social situations (Sarmiento-López & Yáñez-Canal, 2019).

8 Original Spanish: "Si bien se dieron desarrollos significativos en psicología comunitaria, no se veía que el conjunto del profesorado estuviese comprometido con un enfoque comunitario en psicología", translation by the authors.

9 The Armero catastrophe was a natural disaster caused by the eruption of the Nevado del Ruiz volcano that affected the departments of Caldas and Tolima (Colombia). It represents the deadliest volcanic eruption of the 20th century, 25,000 inhabitants died as result of the tragedy (Albornoz-Plata, 1994).

10 Original Spanish: "El desastre natural de Armero significó toda una confrontación ética frente al quehacer del psicólogo, pues allí se evidenció la contradicción entre las teorías traídas del exterior y las realidades específicas que aquí se vivían", translation by the authors.

One of the memorable experiences was the study-intervention in poor neighborhoods of the city of Cali, called “El Cali que queremos” [*The Cali we want*], concluded that social transformation projects must consider the subjective identification processes that underlie the daily life of every member of the community.

Changing the ways of collective life is the first step to construct a political solution to the conflict (Arango-Cálad, 2006). Cultural modification involves intervening in the subjective individual and the social-community field. The usual approach of community Psychology was to perceive the community as an organic whole that should be empowered. However, the experiences of Arango’s working group stressed the commitment to community empowerment and community and participatory development, as the final battlefield for the social transformation of a given community.

The Nature of the Current Practice in Colombian Political Psychology

At the beginning of the new millennium, emerging research groups developed lines of research on issues related to violence, armed conflict, victims, and psychosocial care. The academic production of Colombian Psychology presents incipient indicators of the interest in these topics (Barrero-Cuéllar, 2015; Cudina & Ossa, 2016). It is important to acknowledge that these initiatives are an effort to build schools of critical and investigative thinking. Besides, they have helped to lay the foundations of a professional training that addresses those social problems of the country.

This was an important aspect of the development of Psychology in the last decade, that makes us foresee the possibility of forging a Psychology for a post-conflict Colombia (Mora-Gámez & Brown, 2019). In this evolution, the work and efforts of a committed academic community reflect an urgency to address the discipline’s decades-long failure to address the nature and complexity of the country’s social phenomena.

We suggest that these are the prodromes of the transition towards a possibly different Psychology

for Colombia. In the last decade, research agendas clearly show a preference in addressing, among many others, issues of historical memory; the analysis of psychosocial factors that affect the mental health of victims of the armed conflict; studies with a gender approach; initiatives to promote a culture for peace building; and issues of restorative justice (Burgess & Fonseca, 2020).

In 2012, the Law 1448, promulgated in 2011, so-called Victims Law, was implemented as a strategy for the symbolic and economic reparation of the victims of the Colombian armed conflict (Delgado-Barón, 2015). The article 137 stated the immediate creation of the Program of Psychosocial and Integral Health Care for Victims (PAPSIVI). According to point 7 of the article, interdisciplinarity of the program is granted by psychologists and psychiatrists with the support of social workers, doctors, nurses, and community promoters (Congreso de la República de Colombia, 2011).

The PAPSIVI is established under the Ministry of Health and mainly focuses on two tasks: Psychosocial care and healthcare with a psychosocial approach. The concept of “psychosocial” was defined in the PAPSIVI’s framework document as “a transversal process of attention and access to the rights of victims in regard of assistance and reparation measures” (Ministerio de Salud y Protección Social, 2017, p. 26). The psychosocial intervention is based on the legal notion of a victim contemplated in Article 3 of Law 1448: “those persons who, individually or collectively, have suffered damage for events that occurred as of January 1, 1985, as a result of violations of International Humanitarian Law (IHL) that occurred with occasion of the armed conflict” (Congress of the Republic, 2011).

PAPSIVI’s strategy defined four modalities of “attention” or areas of intervention: Individual; family; community; and collective. Individual attention refers to the moral, physical, emotional, and mental injuries suffered. Family care is focused on changes in family roles and structures. Community attention is related to the reconstruction of the social fabric. Finally, collective attention is

related to addressing the damage to communities, population groups and social sectors that share a particular identity (Gobierno de Colombia, 2018). Currently, of the 7,155,469 victims registered in the Comprehensive Care and Reparation Unit for the victims, only the 3% equivalent to 212,505 have been users of psychosocial care service. Unfortunately, there is no data repository detailing the type of psychosocial care provided and there are few metrics of the effectiveness (see, Unidad para la Atención y Reparación Integral a las Víctimas, May 21, 2019).

PAPSIVI has been in place for 6 years, so far. Collective reparation exercises took place between 2012 and 2015 in communities as El Tigre, El Placer, Juan Frío, and Libertad, with the participation of around 1825 community weavers (Unit of comprehensive care and reparation of victims, 2015).

The “*Sujeto de Reparación Colectiva*” (SRC) [Subject Collective Repair] is developed in different phases: Enlistment; damage diagnosis; formulation; and implementation (Ministerio de Salud y Protección Social, 2017). In the enlistment phase, the collective subject of reparation, the scope, objectives of the reconstruction of the social fabric are socialized. In the diagnostic phase of the damage, the violent events and the consequences and any sequelae generated are identified. In the next phase of formulation, the specific strategies that could solve the consequences identified in the previous phase are selected in a participatory manner. Finally, the implementation is in charge of the *weavers* or community leaders, with whom collective grief are carried out, rituals among others (Mesa Psicosocial, May 6, 2016).

Obstacles to the Process

The difficulties of psychosocial care in Colombia can be categorized in three main issues: Outsourcing; decontextualization of professional groups; and administrative bureaucracy (Villa-Gómez et al., 2017). Outsourcing consists of the State delegating the psychosocial care process to non-governmental entities (foundations, universities, corporations, etc.), often without sufficient experience and little knowledge of the legislation

and the cultural and political context of the focus population of intervention. Outsourcing often results in non-continuity of processes that require long-term development, as community care that includes the reconstruction of the social fabric and community rehabilitation. According to some experiences of PAPSIVI professionals, the lack of knowledge of the cultural context has hindered community attention related to the reconstruction of the social fabric.

According to some leaders of victims participating in the IV session of the National Victim Board, the constant characterizations of PAPSIVI led to a re-victimization of the population that is the object of care: “In my territory PAPSIVI has gone four times, but each time that they go they make a characterization and do not take into account the previous process advanced, that becomes a revictimization and makes us feel used” (National Victim Board, December 13 and 14, 2018).

PAPSIVI has worked in an externalist and bureaucratic way, in that sense, they end up making it difficult to fully recover the victim, as the former congressman and psychologist Ángela María Robledo (2013) stated: “the national government does not have data on minimum advances an information system, even if it is precarious and can show some progress in inter-institutional coordination and coordination” (p. 5).

The bureaucratization of PAPSIVI can be characterized in three aspects:

- a) Replica of the failed existing healthcare system. The deficiencies of the current healthcare system have been transferred to the comprehensive system of care for victims. According to the 2017 report of the ombudsman to the Colombian congress, over a total of 1003 cases identified only 78 received mental and psychosocial care (Defensoría del Pueblo, 2017). “They only give two or three appointments in the first year and in the second year they send another person, and then again they are asked to answer the same questions” also cases like, “it is already your fourth visit and this is all we can do for you, they already compensated you. And, in addition,

your case is already registered, registered in the Victims Unit, so this is already the last visit and is the closing” (Mesa Psicosocial, 2016).¹¹

b) Budget variations. During 2015, PAPSIVI suffered a reduction in the budget in most of the territories.

c) Disarticulated system. PAPSIVI does not have a single administrative unit. There is no coordinated and strategic action between the Ministry of Health, the victim’s unit, and the Historical Memory Center.

The professionals constituting the operator’s body must expand their epidemiological reading of the victims. That is, they must go beyond the legal category of the victim determined by Law 1448, leading to a resignification of the victim’s condition. The few epidemiological studies are limited to showing frequencies about the psychological affectations or typecasting the suffering of the victims in psychiatric diagnoses. At the national victims’ tables, it has been suggested that PAPSIVI should have its own “indicators of emotional reparation”. It is also necessary to insist on a differential and critical approach to psychosocial care, to create a commission of experts to accompany and make visible a national discussion about working with victims.

Given so many administrative deficiencies and institutional inability to develop a comprehensive system for psychosocial care for victims, there is a political and ethical challenge for the professionals who have been leading these processes, namely for psychologists. They have the immediate challenge of convening a participatory national discussion about the extension of the validity of the 1448 law on victims and proposing that it become a public policy. It is essential that the integrated teams

psychosocial care operators in the country begin to publish and generate research knowledge integrating psychosocial intervention proposals with a cultural and political approach (Millán et al., 2020; Aguilar et al., 2021; Cudina, et al., 2022; Arango-Cálad., 2019).

Some Notes on Psychological Research Agendas for a Post-conflict Colombia

Since the establishment of the negotiation talks to carry out the peace agreements between the Colombian national government and the FARC, in Havana (Cuba) on September 4, 2012, the academic community in general has been interested in developing reflections and studies that would provide an understanding of the complexity of the phenomenon of violence in the country. The internal armed conflict in Colombia and its vicissitudes has been an object of study by various disciplines (Venegas-Luque et al., 2017; Plazas-Díaz, 2017). From an interdisciplinary point of view, each discipline integrated data, methods, concepts, and theories that enabled a comprehensive understanding of a complex phenomenon (Masse et al., 2008; Van den Besselaar, 2012).

Also, Colombian Psychology soon initiated research about this phenomenon in the different fields of intervention of the discipline. Since the beginning of 2017, the armed conflict is studied by articulating diverse lines of work and fields of intervention of Psychology. We can identify at least six lines of work and research within the discipline that have been constituted since the signing of the peace agreements¹² (see Figure 1).

11 Original Spanish “Solo dan 2 o 3 citas en el primer año y en el segundo año envían a otra persona, y entonces de nuevo se les pide que respondan a las mismas preguntas” también casos como, “ya es tu cuarta visita y esto es todo lo que podemos hacer por ti, ya te indemnizaron. Y, además, tu caso ya está registrado, inscrito en la Unidad de Víctimas, por lo que esta es ya la última visita y es el cierre”, translation by the authors.

12 In the last five years, the academic production of Psychology that has focused on approaches to the internal armed conflict has grown significantly. This academic production in turn has made it possible to account for particularities that favor a comprehensive understanding of the Colombian conflict and has opened the possibility of strengthening specialized lines of research that have contributed significantly to its approach and understanding. The figure presented in this paper is a map of co-occurrence of concepts that allow us to reveal lines of research based on the sample of academic production. The data that makes possible to visualize the figure was elaborated from the work of Camilo Rincón-Urrinago (2019) “Psicología de la justicia transicional en Colombia” (Psychology of transitional justice in Colombia).

armed conflict in Colombia (Centro Nacional de Memoria Histórica, 2018). It is necessary to move towards multidimensional work proposals that contribute to ensure the integration of civil society in the territories. The tearing of the social fabric as a result of war, disasters or neoliberal policies, should be considered as a key element of the reconstruction process.

A fifth line has been focusing on intervention with children, women and families who are victims of forced displacement. This phenomenon has been a consequence of the internal conflict for many years. The psychological, social, and legal impact is an aspect that has left an enormous damage on victims of displacement due to violence (Lozano & Gómez, 2004). It is necessary to establish the psychological implications: The discipline becomes a field that has much to say in this regard to facilitate the guarantees of land restitution processes and the welfare of uprooted families.

Finally, a sixth line has to do with studies that focus on the approach to mental health related to the armed conflict. In contexts of violence as those experienced in Colombia, mental health is highly at risk of being affected not only immediately but also in the medium and long term. The situation is complicated by the little attention so far received. Chaos and violence increase the risk of psychological trauma. The domestic conflict not only generates deaths, injuries, and physical disabilities, but also leaves traces in the psychic lives of individuals, families, and society (Tamayo-Agudelo & Bell, 2019; Bell et al., 2012). Psychology as a guild is able to support the generation of public policies in mental health that contribute to the intervention of the social trauma that the war has left for years and that allows us to move towards a post-conflict Colombia, and instituting Psychology in the country (Cudina et al., 2022).

Concluding Remarks

Amidst the complexities of the country, new emerging problems and social phenomena, there are still large social inequality, precarious employment

conditions, insufficient healthcare and education that were ultimately some of the structural causes of the armed conflict. For a long time, the political commitment of the disciplines was prevented, because of processes that exceeded the disciplines themselves. However, it seems that the existing agreements and the latest collective popular expressions are headed towards a different Colombia.

Before the awakening of a new Colombia, the psychologist inevitably faces a twofold call: On the one hand, to commit its praxis to the construction of social coexistence (ethical dimension); on the other hand, to provide the means to support social transformation (political dimension). Ignacio Martín-Baró as defined this twofold commitment the *Politics of Psychology* (Martín-Baró, 1991). In its ethical-political dimensions, Psychology has a shaping effect of society, that is in essence the disposition of a social and political power in Psychology (Martín-Baró, 1985).

This involves analyzing the practices of the psychologist in the different fields of intervention and observing the contributions of Psychology in social changes as well as the advances of the discipline in the country. Psychology was absent in processes of reconstruction of the historical memory of the victims as that produced in the late 1960s, at the end of the period known as “violence”. In general, the contributions of Psychology in the care of victims with a community focus during the 80s were forgotten.

The emergence of a political project for Psychology in Colombia needs to question the psychologist's relationship with politics in its social and historical context. Although it is true that today it is difficult to frame a way in which Psychology unfolds all its potentialities, it is important to recognize that some terrain has been plowed. The entire psychologists' union in the country has the opportunity and the burden to address the call of social unity; to contribute to mend the social fabric; and to accompany the work of ideological criticism of some committed academics.

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doi: <https://doi.org/10.15446/rcp.v32n1.96617>

La Instalación del Trauma en dos comunidades de Colombia: Trauma Colectivo y Marcos Discursivos

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Cómo citar este artículo: Parales Quenza, C. J., & Ramírez-Cortázar, F. (2023). La instalación del trauma en dos comunidades de Colombia: trauma colectivo y marcos discursivos. *Revista Colombiana de Psicología*, 32(1), 49-66. <https://doi.org/10.15446/rcp.v32n1.96617>

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SCIENTIFIC RESEARCH ARTICLE

RECEIVED: SEPTEMBER 6, 2021—ACCEPTED: JULY 13, 2022

Resumen

Las comunidades que enfrentan experiencias de violencia extrema sufren daños en su estructura social, que afectan relaciones interpersonales, sentimientos de integración social e identidades personales. Propusimos el concepto de instalación del trauma como construcción sociopolítica y eje de asignación de sentido, que permite a las comunidades explicar lo desconcertante. La instalación consiste en el andamiaje de recursos, materiales y simbólicos, que ofrecen interpretaciones situacionales de una experiencia; nos enfocamos en elementos simbólicos, específicamente en marcos discursivos, que son soportes de significación y organizan contenidos con el fin de comprender eventos. En esta investigación analizamos marcos discursivos de dos comunidades que enfrentaron situaciones de violencia extrema (masacres), con el objetivo de estudiar términos de instalación y elaboración del trauma colectivo. Identificamos marcos discursivos genéricos y específicos, que posibilitaron la construcción comunitaria de una narrativa del trauma. El concepto de instalación del trauma sirve para revisar estrategias de contención psicosocial ante eventos que alteran el tejido social de una comunidad.

Palabras clave: marcos discursivos, masacres, memoria social, trauma colectivo, víctimas, violencia.

The Installation of Trauma in Two Communities in Colombia: Collective Trauma and Discursive Frames

Abstract

Communities that experience extreme violence suffer damage to their social structure. This affects interpersonal relationships, feelings of social integration, and personal identities. In this article, we propose the concept of installation of trauma as both a sociopolitical construction and a strategy of meaning that allows a community to elaborate on traumatic events. The installation consists of the scaffolding of resources both material and symbolic, that offer situational interpretations of an experience. Focusing on symbolic elements, specifically on discursive frames as structures of meaning with communicative purposes, we analyzed the discursive frames of two communities that faced events of extreme violence (massacres), with the aim of studying the terms of installation and elaboration of collective trauma. The results revealed generic and specific discursive frames that allowed the community the construction of the trauma narrative. The concept of trauma installation serves to study psychosocial holding strategies in communities facing tragedy.

Keywords: collective trauma, discursive frames, massacres, social memory, victims, violence.

Introducción

EN SU artículo sobre la historia de las actitudes y otras estructuras representacionales, McGuire (1986) indicó áreas prometedoras para el estudio de las creencias sociales, una de ellas, la que denominó *módulos de creencias miniatura* que tendrían funciones importantes en la organización ideológica. Entre dichos módulos, destacó a los marcos, *schemata*, agendas, *scripts*, teorías implícitas, etcétera. Tuvo razón, sin duda, porque el estudio de dichas estructuras ha llamado la atención de investigadores en ciencias sociales en las últimas décadas. Si se considera la tarea de construir el sentido de cuanto ocurre a nuestro alrededor como una demanda fundamental y permanente de la existencia, entonces el estudio de sistemas representacionales complejos permite entender los términos de las relaciones entre individuos y grupos con el mundo. La naturaleza colectiva de dichos sistemas es evidente si pensamos que tienen como condiciones al lenguaje y la historia.

En este artículo presentamos los términos de la construcción social de sentido en relación con objetos inaprensibles, específicamente la experiencia de haber sido testigo y víctima de masacres. Para este fin, utilizamos la perspectiva de los marcos discursivos, la cual subraya el aspecto comunicativo y constructivo de la vida social. Los marcos discursivos son principios organizadores que orientan la comunicación y tienen un carácter social; se identifican por vocabularios definidos. No son solamente estructuras cognitivas, sino también elementos comunicativos que facilitan la comprensión del mundo y la comunicación social. El trauma es una narrativa de significación que ayuda a darle sentido a lo indecible; es también una herramienta política y un ámbito de representaciones ideológicas en tanto busca transformaciones en la identidad social y personal. Los marcos ayudan a la construcción compartida del trauma colectivo mediante la descripción de los hechos, identificación de agentes y explicación de causas.

Denominamos *instalación del trauma* al proceso de ensamblaje de elementos materiales y

simbólicos a partir de los cuales individuos, grupos e instituciones participan en la coconstrucción de una narrativa que permite superar la crisis de sentido producida por la tragedia. Para ilustrar parte de los recursos empleados en la instalación del trauma, analizamos marcos discursivos en dos comunidades que fueron casos ampliamente conocidos de violencia extrema en Colombia: San Carlos y El Salado, a través de entrevistas realizadas por el Centro Nacional de Memoria Histórica (CNMH) (Centro Nacional de Memoria Histórica [CNMH], 2009, 2011).

Marcos Discursivos

Un marco discursivo es una categoría que organiza un tema o acontecimiento con el fin de dotarlo de sentido; indica los términos en los que se entiende un problema. El desarrollo de un marco discursivo comprende selección, categorización e interpretación, porque destaca unos contenidos sobre otros y los emplea para concebir una perspectiva particular, usualmente ligada a posturas ideológicas y políticas dominantes. Cualquier tema, circunstancia o evento tiene el potencial de alterar el equilibrio del saber de un grupo social. Lo disruptivo que trae consigo una nueva experiencia moviliza el conocimiento colectivo, que busca asimilar y elaborar lo novedoso. Hacen parte de esa elaboración conceptos tales como narrativas, representaciones sociales y marcos discursivos, entre otros.

El marco se construye desde (a) posturas políticas y (b) contextos de comunicación, tomando elementos de las creencias compartidas socialmente (por ejemplo, valores, actitudes y conocimientos). El marco no es solo una construcción a priori, sino también un mecanismo de racionalización que permite justificar acciones y decisiones. La función básica de un marco es sustentar argumentaciones y asegurar coherencia. Según Entman (1993), los marcos permiten seleccionar problemas, indagar causas, valorar el acontecimiento y proponer soluciones.

La noción de marco discursivo se asemeja al concepto de *schemata* en cognición social. Los

esquemas son estructuras que organizan contenidos para darle unidad y coherencia a un conjunto de observaciones. Lo que subraya el concepto de marco discursivo y lo diferencia de los esquemas es el carácter participativo y dinámico de las impresiones y su papel en la comunicación. Un marco puede tener sentido en un contexto de interacción, pero no en otro. Además, se expresan en distintos niveles: psicológico, social y cultural. Los marcos destacan el carácter creativo, flexible y dinámico de la comunicación.

Desde el nivel psicológico, el mismo objeto puede evocar respuestas distintas, dependiendo de cómo se presente (Tversky & Kahneman, 1981). Desde un punto de vista sociológico, Goffman (1974) pensó en los marcos en términos de un encuentro social. La pregunta es cómo se entiende una situación de interacción y se organiza la experiencia. Los marcos son estructuras cognitivas de percepción y juicios; el concepto de marco discursivo recalca el aspecto comunicativo desde el que se crea el marco.

Entre las definiciones más conocidas de marcos se encuentran, además de la de Entman, las de Gamson y Modigliani (1989) y de Gitlin (1980). De forma general, estos autores entienden los marcos como ideas básicas cuyo propósito es organizar el mundo. Aunque Gamson y Modigliani señalaron el carácter de centralidad que tienen los marcos en las estructuras interpretativas, uno de sus rasgos sobresalientes es la variabilidad. Edelman (1993) hizo referencia al “caleidoscopio de realidades potenciales” para referirse a la multiplicidad de narrativas que puede suscitar un acontecimiento. La creación de distintas versiones sobre un objeto muestra la multiplicidad de formas en las que desde los discursos se construyen hechos.

Los cambios de encuadre como respuesta a variaciones del contexto transforman la percepción del objeto, aun de manera temporal. Para Ichheiser (1966), los contenidos de la percepción determinan la dirección de la valoración. La relación entre percepción y valoración es compleja porque si bien es cierto que la percepción determina actitudes, también lo

es que las valoraciones seleccionan contenidos con el fin de producir hechos más o menos coherentes.

Tanto la construcción como la selección de los marcos son procesos que se establecen a partir de valores, que resultan de la identificación con grupos de referencia, puesto que ninguna concepción sobre el mundo y acerca de lo que hay en él es independiente de valoraciones e identificaciones sociales. Al enfatizar el aspecto discursivo, se establece que descripciones y valoraciones son aspectos inherentes al lenguaje.

Los marcos se expresan en varios niveles, desde los más específicos hasta los más generales. De Vreese (2005) estableció una tipología que comprende dos clases de marcos: genéricos y específicos. Existe una organización jerárquica de los marcos y en los discursos se encuentran ambos tipos; la jerarquía se determina no solo con respecto a la especificidad temática, sino también en cuanto a su estabilidad.

En este artículo exploramos los marcos discursivos en dos comunidades sometidas a violencia extrema en Colombia. Quisimos mostrar el papel sustancial que cumplen los marcos en dar sentido incluso a los acontecimientos más desconcertantes, además de que apoyan la construcción del trauma y la producción de sus consecuencias, por ejemplo, en la definición de víctimas, identificación de culpables y puesta en marcha de procesos de perdón y reparación. La construcción social del trauma es un recurso terminante que permite la creación de una narrativa de sentido.

Trauma Colectivo

Nuestro nivel de análisis es la comunidad. Desde lo colectivo, el trauma se caracterizaría por la erosión o el rompimiento del tejido social de una comunidad como resultado de una situación o acontecimiento inédito; el trauma colectivo daña la integración social y produce crisis de sentido. Con la desintegración de los vínculos desaparece la coherencia social y la continuidad de lo cotidiano, perdiéndose la confianza. Los huecos de las rupturas los llena el miedo.

Como lo señalan los modelos psicosociales basados en la identidad social, dado que la comunidad es recurso de apoyo y bienestar, además de otras motivaciones psicológicas importantes como autoconcepto, autoestima, etcétera, el trauma colectivo altera las identidades personales por lo que se traduce también en malestar individual (Schmid & Muldoon, 2015).

Al hacer referencia al nivel colectivo del trauma, seguimos las ideas de Erikson (1991) con respecto a la comunidad traumatizada como ámbito específico de análisis. La comunidad traumatizada no se considera una agrupación de individuos traumatizados porque el interés se encuentra en el daño que se produce en los vínculos y las relaciones sociales, es decir en la esfera de lo interpersonal.

En el trauma, el papel de orientación y contención que cumple la comunidad deja de funcionar, por lo que surge el sentimiento de que la sociedad es impredecible y carente de sentido. El ritmo de lo cotidiano se rompe y da paso a la incertidumbre que alimenta la ansiedad constante. Para Erikson las identidades sociales no desaparecen, solo se transforman por identificaciones en la tragedia que resultan, en lo que denominó *comunidades tóxicas*. El concepto de trauma cultural hace referencia a una construcción social frente al horror de lo indecible, que requiere de unas condiciones socioculturales e históricas específicas (Alexander, 2004; Smelser, 2004). Esto quiere decir que un evento requiere de circunstancias que lo hagan visible, importante y amenazador.

En la teoría cultural del trauma (Alexander, 2004), ningún evento tiene en sí mismo el potencial de ser inherentemente traumático. Lo que se destaca es la forma en la que el evento se representa conforme a las especificidades de la historia y la cultura, por lo que el trauma cultural es básicamente una *representación social*. Para ser representado, intervienen una serie de agentes colectivos específicos, que comunican a unas audiencias el reclamo de que un valor fundamental de la sociedad ha sido profanado y debe repararse. Con el fin de que el reclamo encuentre

eco en la sociedad, los colectivos transmisores deben reconstruir la narrativa desde los marcos de lo traumático. Alexander hizo referencia a una narrativa maestra que requiere reconstrucciones del hecho, identificación de víctimas y perpetradores, y construcción de memoria social. Nosotros retomamos estos aspectos del proceso del trauma cultural para proponer el ensamblaje situacional de recursos que ofrece la instalación del trauma.

Instalación del Trauma

Por instalación del trauma entendemos el proceso de ensamblaje de lo traumático. Para ello recurrimos a la metáfora de la *logística*. Un conjunto de actores, con intereses políticos propios, medios y metodologías organizan el montaje del trauma que va a ser necesario, entre otros aspectos, para la definición e identificación de víctimas, reconocimiento de perpetradores, puesta en marcha de procesos de justicia, perdón y reparación, construcción de memoria social y retorno de los pobladores.

Los actores de la instalación están conformados por agentes gubernamentales, población civil, organizaciones sociales, organismos internacionales, agencias de cooperación de otros países, organizaciones no gubernamentales, académicos e instituciones académicas, todos los cuales aportan y captan recursos económicos en el proceso. Los medios son las acciones y estrategias que emprenden los actores de formas más o menos coordinadas por el Estado. Las metodologías son el conjunto de conocimientos, procedimientos, prácticas y terminologías que emplean los actores. La instalación del trauma es una metodología que va a permitir en conjunto con el desarrollo de la memoria colectiva, la elaboración social del suceso mediante, por ejemplo, el uso de vocabularios. Los marcos discursivos son un aspecto fundamental de estos procesos de tramitación colectiva de lo siniestro, ya que posibilita buscar causas y explicar lo sucedido. Las comunidades no tendrían la capacidad de iniciar por sí solas este proceso debido al desplazamiento de los habitantes, desintegración social y la carencia de medios y metodologías. Esta

investigación está circunscrita al análisis de una parte de los recursos simbólicos del ensamblaje, es decir, los marcos discursivos.

Contexto de Investigación

La investigación comprendió el análisis de entrevistas con participantes de dos comunidades de Colombia que padecieron situaciones de violencia extrema, específicamente masacres: San Carlos y El Salado. Los eventos hacen parte del contexto más general de la violencia interna colombiana en el periodo 1990-2010.

El primer contexto es el municipio de San Carlos, ubicado en el oriente del departamento de Antioquia, a 108 kilómetros de la ciudad de Medellín y con una población aproximada de 16 000 habitantes. La historia de violencia y desplazamiento de esta comunidad es reseñada por el CNMH en cinco momentos, el más violento de ellos denominado *el éxodo* (1998-2005) y caracterizado por desplazamientos masivos de la población, masacres, asesinatos selectivos y secuestros (CNMH, 2011).

El periodo del éxodo se distinguió por el aumento de la violencia y de su intensidad; la característica principal fue la crueldad. Durante esa fase se reportó un total de 33 masacres y 205 asesinatos. La función de las masacres fue crear terror y difundirlo en las comunidades vecinas. El referente histórico del inicio de este periodo fue la masacre de La Holanda, con la que comenzó el ingreso de los paramilitares a la región. En dicha masacre, un grupo de aproximadamente 200 paramilitares asesinaron y decapitaron a 13 personas.

Las masacres se convirtieron en puntos de referencia de la memoria colectiva de San Carlos. El impacto emocional en la comunidad, reportado por el CNMH fue intenso. La organización de los recuerdos, sin embargo, se enfrentó con tres dificultades: la fragmentación social, producto de diferencias en identificaciones políticas; el desplazamiento de la población, que ocasionó la dispersión de la comunidad, y la evitación del recuerdo, como mecanismo defensivo.

El segundo caso se trata de un contexto cultural y geográficamente distinto, el de El Salado, un corregimiento del municipio de El Carmen de Bolívar, en la costa Caribe colombiana. El Salado es una comunidad de unos 500 habitantes que forma parte de una región denominada Montes de María, escenario de varias masacres notorias del conflicto armado nacional. Contrario al caso de San Carlos, en el que se trató de una etapa dentro de una historia de violencia de cuatro décadas, el caso de El Salado hace referencia a una masacre descrita como un hecho de crueldad extrema y de maldad porque tuvo entre sus características la teatralización (CNMH, 2009).

La masacre de El Salado ocurrió entre el 16 y el 21 de febrero del 2000 por un grupo aproximado de 450 paramilitares que asesinaron a 60 personas. El hecho central de esta masacre se produjo el 18 de febrero, cuando luego de reunir a la población en el parque principal del poblado, se escenificó una fiesta en la que fueron torturadas y asesinadas 38 personas.

La masacre de El Salado ha sido considerada una muestra de la degradación del conflicto armado en Colombia, que tuvo en el año 2000 el momento más intenso en cuanto a masacres se refiere, con un total de 260 masacres y 1577 víctimas. Al igual que en el caso de San Carlos, los efectos psicosociales de estos hechos fueron considerables. Existe un recuerdo individual que permanece confinado en el ámbito de lo privado, de lo que no se habla pero que se expresa en el silencio, y una memoria colectiva de más lento desarrollo, limitada por la desintegración social y el desplazamiento de la población.

En ambos casos se trató de acontecimientos desconcertantes y experiencias inconcebibles cuya organización en términos de recuerdo colectivo fue obstaculizada por la desintegración de las comunidades. Con la pérdida de los ritmos cotidianos, junto con la desintegración social, los individuos quedaron a la deriva sin el sostenimiento que proporcionan las redes de apoyo social. En esas circunstancias fue indispensable la formulación de atribuciones y de marcos de asignación de sentido que ayudaran

a darle trámite a la experiencia sufrida. En esta investigación indagamos por esos marcos en la perspectiva de la instalación del trauma.

Método

Para identificar los marcos discursivos analizamos 26 entrevistas que fueron realizadas por personal del CNMH a habitantes de San Carlos ($N = 20$) y El Salado ($N = 6$) con respecto a las experiencias de violencia vividas en ambas comunidades. Las entrevistas habían sido transcritas por el CNMH con omisiones de nombres, otros datos sociodemográficos relevantes y lugares específicos con el fin de proteger el anonimato de los entrevistados. Las transcripciones fueron solicitadas directamente al CNMH. La disponibilidad de las entrevistas evitó que repitiéramos el proceso de volver a entrevistar a participantes de ambos contextos con respecto a experiencias complejas. Nuestro interés fue identificar los vocabularios que caracterizaron las descripciones-explicaciones de los hechos de violencia sufridos.

El uso de material recolectado por el CNMH merece dos consideraciones importantes. La primera es de orden ético. Realizar entrevistas sobre los acontecimientos ocurridos y evocar recuerdos, aunque puede ser bien tolerado y mostrar beneficios, no exime de riesgos y problemas, por ejemplo, retraumatización (Figley, 2012). Tampoco contamos con los recursos para ofrecer apoyo profesional en caso de ser necesario. La segunda es de tipo práctico. La situación sociopolítica y de violencia de los últimos cinco años, aunado a la pandemia por COVID-19 hizo imposible las visitas de campo para recolectar material, incluido el registro de monumentos conmemorativos y otros elementos de objetivación del trauma que hacen parte del proceso de *rutinización* (Alexander, 2004). Por otra parte, el hecho de analizar material del CNMH no afecta nuestra propuesta de instalación del trauma, debido a que se trata de un escenario institucional de mediación y creación de la narrativa maestra.

Operacionalmente los marcos se consideraron clases semánticas identificadas con el *software* IRAMUTEQ (Interface de R pour les Analyses

Multidimensionnelles de Textes et de Questionnaires) (Ratinaud, 2008), el cual permite el análisis estadístico multivariado de textos naturales mediante el examen de la distribución del vocabulario, de forma similar a otros programas de análisis estadístico de textos como ALCESTE (Reinert, 1990). Los vocabularios establecen y modifican los marcos. Tanto las palabras como su frecuencia dan una idea de los términos en los que se representa un objeto. IRAMUTEQ utiliza un procedimiento de clasificación jerárquica descendente para establecer categorías semánticas mediante métodos estadísticos como segmentación, clasificación jerárquica y dicotomización; para una descripción un poco más detallada del programa ver Camargo y Justo (2013). Las clases semánticas que resultan del análisis nos muestran las formas discursivas de entender un objeto (Matthes & Kohring, 2008). En la comunicación esas formas varían, lo cual no es tenido en cuenta en encuestas tradicionales de opinión pública o actitudes. Estimamos que esos marcos organizan el discurso en el encuentro comunicativo, a partir de los cuales se pueden expresar acuerdos o desacuerdos.

El análisis automatizado de los marcos ofrece ventajas comparando la codificación manual de textos. Permite incorporar en el análisis, grandes volúmenes de texto y realizar el análisis en corto tiempo, hace confiable el proceso de categorización y proporciona análisis estadísticos sofisticados que posibilitan representar de forma gráfica la organización de la representación de un objeto.

Resultados

La investigación distinguió los marcos genéricos de los específicos. Los primeros no están asociados a un tema particular; son categorías básicas que sirven para formular atribuciones. Los segundos, por otra parte, son temáticos y se refieren a aspectos definidos del objeto. En el análisis de las entrevistas identificamos marcos genéricos que muestran discursos organizados en tres categorías generales: *hechos*, *causas* y *actores*. Mediante los genéricos es posible darle sentido aun a lo inconcebible, relatando lo que sucedió, estableciendo causas, identificando

agentes responsables y permitiendo la distinción entre víctimas y perpetradores.

Caso San Carlos

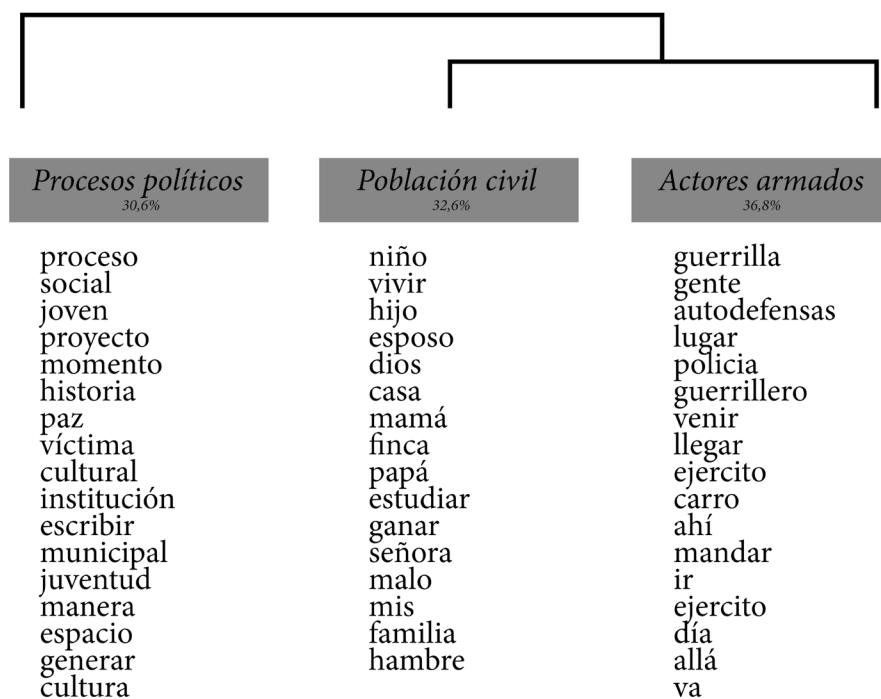
Las 20 entrevistas de este caso revelaron 153 261 ocurrencias y 6098 formas semánticas que agrupamos en tres marcos específicos según las clases semánticas: **causas** (clase semántica 1: *procesos políticos*) (ver Figura 1); y un marco de **actores** (clases 2 y 3: *población civil*, *actores armados*), en los cuales cada clase estableció la conexión entre actor y acción. La razón por la que no apareció un marco específico de *hechos* se debe a que en el caso de San Carlos no se trató de un solo evento, sino más bien de una situación general de violencia de un poco más de tres décadas de duración.

Ambos marcos de actores establecieron una diferenciación perentoria entre población civil y grupos armados, fundamental para la distinción bueno/malo, víctimas y perpetradores. Las categorías

bueno/malo son esenciales para organizar el sentido de cualquier acontecimiento. Moralidad y responsabilidad han sido señalados en la literatura como marcos genéricos (Semetko & Valkenburg, 2000); una de las funciones de los marcos es precisamente establecer la evaluación moral del hecho.

El marco **actores** distinguió *víctimas* y *culpables* a partir de la división entre población civil y actores armados, que son dos categorías específicas de atribución. El mecanismo fundamental de la distinción es el *clivaje*, un proceso básico que sirve para organizar hechos y comprenderlos mediante el establecimiento de categorías opuestas. El clivaje es una característica del funcionamiento de las creencias sociales, que se radicaliza en contextos de confusión y desorganización social porque simplifica la complejidad de los acontecimientos. El marco víctimas dio cuenta del 32.6% de las formas semánticas, mientras que el de victimarios comprendió el 36.8% del vocabulario.

Figura 1. Dendograma (clasificación jerárquica descendente) de clases lexicales (marcos discursivos específicos). Entrevistas en San Carlos. Estos se obtuvieron por clasificación jerárquica y el porcentaje representa la cantidad de formas semánticas que recoge cada clase.



En el marco *población civil*, los términos se agruparon en condiciones propias del ser humano (humanidad), principalmente positivas y relacionadas con la pertenencia a una familia y a la sociedad. Diez palabras características de este marco fueron: *niño, vivir, hijo, finca, esposo, mamá, ganar, papá, casa, Dios, ver*. En el marco *actores armados* aparecieron grupos armados, tanto legales como ilegales, y algunas de las palabras características fueron: *guerrilla, lugar, autodefensas, policía, gente, llegar, guerrillero, venir, ejército, mandar*.

El marco *causas* dio cuenta del 30.6% de las formas semánticas. Las causas se reconstruyeron principalmente desde su aspecto político: la violencia fue consecuencia de procesos políticos que se desarrollaron en la región. En este marco, la experiencia se relató desde un aspecto formal y público, separado de lo emocional y privado y enfocado en la juventud políticamente activa que sirve para distanciar un presente de violencia de un futuro promisorio. Entre las formas semánticas representativas de esta clase se encontraron: *proceso, social, joven, proyecto, historia, momento, escribir, paz, juventud, municipal*. Que el aspecto político se destaque como causa de violencia muestra que los discursos de la comunidad han alcanzado un alto grado de elaboración y sofisticación, resultado de su historia específica en relación con intereses de empresas de ingeniería, presencia de grupos armados y discursos institucionales, entre otros.

Caso El Salado

Las seis entrevistas de este caso reportaron 23 480 ocurrencias y 1959 formas semánticas. Las formas más frecuentes fueron los verbos *decir* (298), *matar* (174) e *ir* (170). Las diez palabras más frecuentes en estos testimonios fueron: *decir, aquí, ahí, matar, ir, gente, ya, ver, hacer y allá*, y demuestran el carácter básicamente descriptivo de la narración. Como en el caso de San Carlos, en El Salado *decir* fue un término frecuente en los relatos, pero además se encontró el verbo *ver* que es el que nos muestra el proceso específico de instalación del trauma. El *ver* supuso la pérdida

de una inocencia que se tenía antes de conocer lo que se vio. El *ver* algo que no se debía tiene un poder de transformación emocional importante. En este caso, lo que se vio fue la masacre.

En el caso de El Salado se obtuvieron seis clases semánticas correspondientes a los marcos (ver Figura 2). Destacamos tres marcos genéricos: **actores**, **hechos** y **causas**. La manifestación del marco *hechos* se debe a que en este caso sí existió un acontecimiento central, la masacre, al contrario de lo que ocurrió en San Carlos. El marco de *actores* fue menos claro en este caso, lo que hace suponer dificultad en lograr la atribución de la culpa. El informe del CNMH sobre El Salado mostró que dicha dificultad podría ser consecuencia de la estigmatización de los habitantes como simpatizantes de la guerrilla, pero además a las teorías de la comunidad sobre las causas de la masacre, por ejemplo, “la maldición de Santander Cohen”, “la venganza de los Méndez”, “el robo del ganado de la Gata” y “fatalidad”.

En cuanto a los marcos específicos, reconocimos: *pérdidas, identificación, masacre, crueldad, retorno y causas*. El marco **pérdidas** (clase 1) hizo referencia a las pérdidas, no solo materiales, sino también al daño en la identidad, desarraigo, cambios y duelos. Palabras representativas de este marco fueron: *mis, salar, cambiar, cosas, pasar, menos, vida, tanto, mal e ir*. La palabra *mis* se refería tanto a pertenencias materiales como al sentimiento de pertenencia. Este marco correspondió al 15.2% de las formas semánticas.

Las clases 2 (*identificación*) y 3 (*masacre*) correspondieron al marco genérico **hechos**; ambos son marcos episódicos que se emplearon para describir la masacre. El primero, **identificación** (clase 2, 12.5%), se centró en la identificación de las víctimas por parte de los paramilitares, esto es, fichar a quienes consideraban colaboradores de la guerrilla. Las palabras distintivas de esta clase fueron, entre otras, *recoger, señor, nombre, número, Dios, llevar, pelar, mía, coger y camino*. El segundo, **masacre** (clase 3, 11.8%), se distinguió por palabras como: *tirar, cancha, abajo, boca, ahí, palo, pata, muchacho, acostaron y*

levantar. Ambos marcos están relacionados con la muerte y específicamente con la descripción de los acontecimientos de la masacre. *Identificación* es un marco que se refiere a la indefensión de las víctimas; describe a las personas que sufrieron torturas y muerte. *Masacre* sirvió para narrar en específico lo que ocurrió en la cancha, el evento central más dramático de la masacre de El Salado.

Como era de esperarse, este aspecto fáctico fue más evidente en la masacre de El Salado en comparación con la violencia de San Carlos, porque allí, en El Salado, los hechos se refieren a un acontecimiento único delimitado en el tiempo. Lo que se describió fue el ritual del terror: el recorrido de los asesinos hasta llegar al caserío, las acciones que llevaron a cabo y las formas de asesinar por descuartizamientos, mutilaciones, empalamientos y degollamientos.

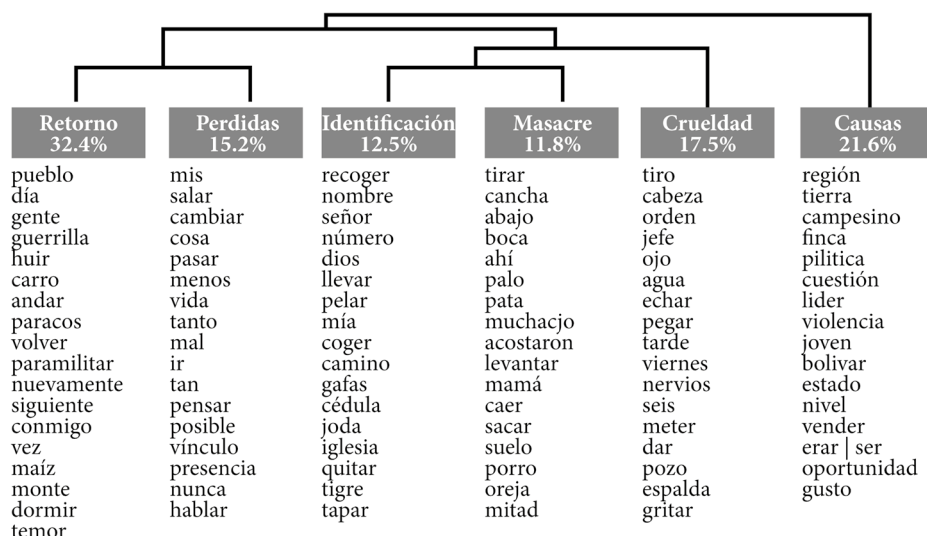
La clase 4 constituyó el marco **crueledad** (17.5%). Se trata también de un marco episódico, pero centrado en la tortura y el goce de matar. Palabras características de este fueron: *tiro, cabeza, orden, jefe, ojo, agua, echar, pegar, tarde y viernes*. La clase 5 es un marco que denominamos **retorno** y correspondió al 21.4% de las formas semánticas. Entre las palabras que lo distinguieron

se encontraban: *pueblo, día, gente, guerrilla, huir, carro, andar, paracos, volver y paramilitar*.

Finalmente, la clase 6 (21.6%) la reconocimos como el marco **causas** (*propiedad*), las que se centraban en factores políticos. En esta clase el lenguaje está relacionado con la tierra, su propiedad, y el problema agrario en general, que los testimonios ubicaron como causa fundamental de la masacre (la propiedad de la tierra y del ganado). Entre las palabras características de este marco sobresalieron: *región, tierra, campesino, finca, político, cuestión, líder, María, violencia y joven*. La narrativa de las causas va cambiando a medida que se elabora el acontecimiento y más actores externos participan en la instalación del trauma.

Un tema importante en los dos grupos de testimonios, tanto en San Carlos como en El Salado, fue la “mala información” a la que se le atribuyeron muchas de las muertes. La mala información es el rumor, reconocido como “malinformar”, una manera muy frecuente de ejercer el mal en Colombia. De todas las palabras contenidas en los testimonios, la forma más frecuente fue el verbo *decir* (frecuencia: 1965). Las palabras tienen el poder de hacer el mal y diseminarlo.

Figura 2. Dendograma (clasificación jerárquica descendente) de clases lexicales (marcos discursivos específicos). Entrevistas en El Salado. Estos se obtuvieron por clasificación jerárquica y el porcentaje representa la cantidad de formas semánticas que recoge cada clase.

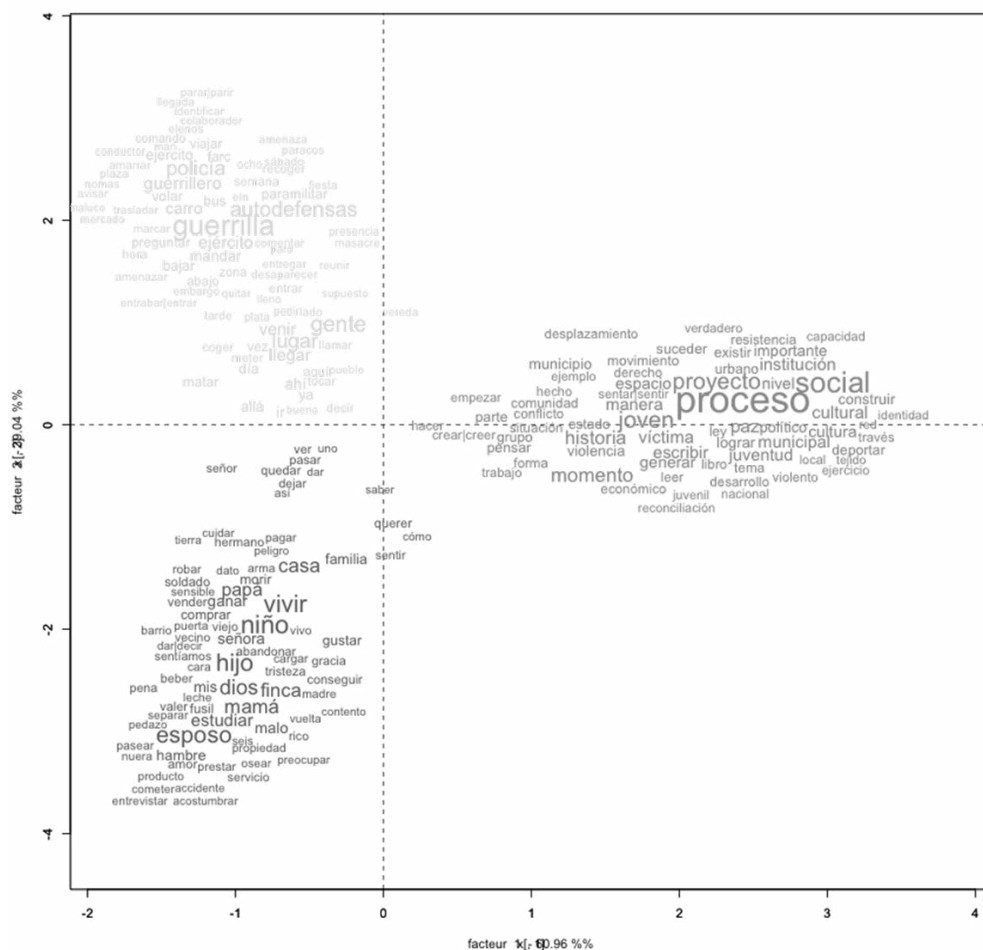


En general, cuando se combinaron ambos grupos de testimonios, el análisis de correspondencia mostró diferencias por sexo y edad (en los casos en que esta información estuvo disponible). Los aspectos político y armado fueron característicos del discurso de los hombres; el aspecto humano fue propio de las mujeres, y el aspecto fáctico de las personas más viejas. Estos resultados, sin embargo, deben interpretarse con precaución.

Las asociaciones en los vocabularios se representaron en espacios multidimensionales mediante el análisis factorial de correspondencia, por lo que se puede apreciar el agrupamiento de las palabras en cada uno de los marcos (ver Figura 3); en el caso

de San Carlos se observan las dimensiones *actores* y *causas*. La caracterización de la experiencia desde el lenguaje empleado en el caso de El Salado se estableció en tres dimensiones según el análisis de correspondencia (ver Figura 4). Una, la de conflicto armado, agrupó dos categorías interrelacionadas que denominamos *aspecto armado* y *aspecto humano*. Los hallazgos sugieren que los vocabularios que hacen referencia a la propia vida están entrecruzados con aquellos de los actores y las acciones armadas; es decir, se vivía en medio del conflicto armado. Las otras dos dimensiones fueron la política y la fáctica. Las dimensiones corresponderían a los marcos genéricos de actores, hechos y causas.

Figura 3. Representación gráfica de los marcos discursivos (análisis factorial de correspondencia). Entrevistas en San Carlos. Se señalan los marcos genéricos obtenidos en la investigación, que fueron actores, hechos y causas.



estuvieron marcadas por el desplazamiento forzado debido a la historia continua de violencia. Allí se distinguió un tiempo de antes, cuando la vida era buena y no existía lo malo. A ese mundo idílico se contrapuso un presente de muerte. En las entrevistas se mencionó que la juventud se perdió en el mundo de ahora y busca compensar la pérdida espiritual con el vicio y la satisfacción materialista. La nostalgia es parte del proceso de reconstrucción de memorias colectivas.

En El Salado, la masacre fue un hecho delimitado, una puesta en escena ante un público obligado a participar de un espectáculo macabro. Allí los procesos fueron los de identificación de la población con grupos armados, estereotipamientos y retaliación. El que en ambos casos se señalaron a muchas víctimas como simpatizantes de grupos armados, expresa las fragmentaciones de las comunidades y la debilidad del tejido social vinculante. Este proceso de estereotipar a la comunidad como guerrilleros fue más evidente en El Salado en comparación con San Carlos.

El léxico de lo político fue fundamental al momento de darle sentido a eventos inconcebibles, como la violencia en formas tan extremas como las que se vivieron en ambos contextos. En los dos casos fue manifiesto un discurso formal, separado de lo vivencial. En general cuando las narrativas emplean la retórica de la formalidad, tienen un carácter público-político. Esta característica sirvió probablemente, al igual que toda ideología, como sistema de contención emocional. Lo político permitió esclarecer, aún si en apariencia, un acontecimiento que fue profundamente oscuro y por lo tanto la política fue un rasgo común de los testimonios, que mostró su utilidad en la explicación de las causas de los hechos. En ambos casos los discursos políticos permitieron la instalación del trauma, que se hace posible identificando causas y culpables, y orientando los cursos de acción.

La categoría política fue, no obstante, distinta en ambos grupos de testimonio, lo cual mostró el efecto de las diferencias de contexto. En el caso

de San Carlos, se trató de un discurso político elaborado que mostró un desarrollo ligado a la historia de la comunidad, centrado en proyectos y en la participación de la juventud, así como en el papel de empresas y grandes proyectos de infraestructura como contextos explicativos de la violencia que se vivió. Organizaciones sociales han promovido el tipo de narrativas especialmente centradas en la participación y movilización. En el caso de El Salado, el vocabulario de lo político tuvo un carácter más campesino y relacionado con la propiedad de la tierra como uno de los detonadores de la masacre.

Los sentidos que se pueden configurar para explicar lo inaudito son producto de la vida colectiva y de la comunicación. En estos casos fue evidente la politización del contenido de una experiencia trágica lo cual, pese a su utilidad, puede resultar insuficiente para la elaboración individual y comunitaria porque se mantiene como un discurso político formal, separado de la experiencia privada y emocional.

El vocabulario de los marcos se negocia entre quienes participan de una situación, aunque siempre hay discursos dominantes y diferencias según los grupos. En El Salado el marco que utilizaron los paramilitares para explicar la masacre fue el de *combate* (entre guerrilla y paramilitares) (CNMH, 2009). De esa forma no se reconocieron como victimarios, negando responsabilidad y sentimientos de culpa.

No sabemos hasta qué punto la preponderancia del discurso político, conveniente, sirvió para no comunicar la vivencia personal o para evitar evaluar y juzgar lo que ocurrió. Cuando sucede algo terrible, las personas temen contarlo. El que puedan dar testimonio no significa que lo hayan podido elaborar.

Alford (2013) indicó que parte del conocimiento que implica lo traumático hace referencia a algo que se puede comunicar pero no compartir; el que escucha no estuvo allí, por lo que esa experiencia se desconoce. Probablemente esa parte privada y emocional de la experiencia nunca se

llegue a comunicar y permanezca escindida de la historia personal. Para Alford el trauma implica conocer algo que se supone no se debería saber.

Cuando los adjetivos describen lo aterrador de la situación, se aprecia la dimensión de lo ocurrido. Tomemos el caso del adjetivo *horrible* que tuvo una frecuencia de 31 y describe el conocimiento en lo traumático al que hizo referencia Alford: “yo nunca había visto una muerte así, nunca. La agonía de quien está muriendo, menos. Eso es horrible” (Hombre, El Salado).

El tratamiento de los cuerpos confirma la maldad extrema de las masacres, tanto en la de El Salado, como en las que ocurrieron en San Carlos. No se trata solo de matar, de homicidios o asesinatos. Las masacres tienen un aspecto que no se puede pensar; no puede imaginarse. Lo que esto muestra es el sadismo intenso y, particularmente, la necesidad de humillar tan característica de la maldad: “A ella la mataron, dizque le metieron un palo por las partes, le metieron un palo por las partes y la puyaron también, a ella la mataron, que la trituraron toda” (Mujer, El Salado).

Después sacaron a Nombre No. 7, a él le dispararon en la cabeza, entonces ellos decían “móchele la cabeza para jugar fútbol”, decían ellos, toda la cabeza se la desbarataron, los sesos cayeron así, el paramilitar con la mano cogió los sesos y nuevamente los colocó en la cabeza; “ya vieron, para que aprendan, no se metan más con la guerrilla” nos decían ellos. (Hombre, El Salado) (de la entrevista)

El desconcierto que produce haber sido testigo del horror no puede elaborarse completamente, lo cual no significa que la persona necesariamente quede sumida en el trauma. El término trauma, sin embargo, apareció en las entrevistas:

(de la entrevista) Porque todavía es la hora que aquí hay gente que se ha muerto de ese mismo temor que hubo; vea la mujer mía, ahora, la semana pasada, sufrió un trauma de nervios de un susto que se pegó; y esa masacre, como ella estuvo en esa fila, ella gritaba loca en el centro de San Pedro de lo que había visto aquí, y ella no está

bien, porque me lo está diciendo “no estoy bien”. (Hombre, El Salado)

Pues me cambió la vida, porque yo digo que yo no era así, no era así tan callado, de expresar las cosas que siento, no era así, y ahora, por más que quiera, me da pena expresarlo, porque me da miedo, me da pena, no sé... (Hombre, El Salado)

Para entender el rol de los marcos discursivos en la instalación del trauma, es necesario cambiar el nivel de análisis y la conceptualización, esto es, pasan de ser esquemas a convertirse en ensamblajes situacionales de objetos materiales (Wood et al., 2018).

A esto nos referimos con el término de instalación del trauma. La instalación del trauma es una muestra de ensamblaje cultural. El trauma se convierte en un concepto público con funciones interpretativas. El trauma colectivo se construye a través de procesos culturales que incluyen discursos, memorias y objetos que materializan la representación del evento, incluidas conmemoraciones, arte y monumentos.

El proceso social del trauma se inicia, de acuerdo con Alexander (2004), en la actividad de agentes colectivos específicos, que tienen intereses ideales y materiales, a los que denominó *grupos transmisores*. Estos grupos, entre los que se destacan varias ONG, agencias internacionales, universidades y académicos, comunican a la sociedad el reclamo sobre la profanación de los valores de la sociedad. Con tal fin se utilizan categorías como los marcos discursivos descritos, de manera tal que la comunicación proporciona respuestas y permite reconstruir lo que ha sucedido, desde la perspectiva de lo traumático. Para Alexander, se construye una narrativa maestra que incluye reconstrucción del hecho, identificación de víctimas y culpables, y propuestas de curso de acción. Los marcos no se imponen, se proponen y la comunidad los acepta o rechaza, y coparticipa en su formulación.

La instalación demanda además la disposición de escenarios institucionales que incluyen celebraciones religiosas, normas jurídicas, proyectos

científicos y académicos, expresiones artísticas y procedimientos burocráticos. Se ensambla de esa manera el aparato de producción del trauma, que ayuda a resignificar lo ocurrido. El trauma colectivo supone el daño al tejido social, que hunde a una comunidad en una crisis de sentido, que es posible tramitar desde la narrativa del trauma (Hirschberger, 2018; van de Ven, 2020).

Discusión

El concepto de marcos o encuadres discursivos constituye además de una metodología, un área de investigación que reconoce las propiedades dinámicas de la comunicación humana y su sensibilidad a las transformaciones del contexto. Cuando se indaga por opiniones o actitudes hacia un objeto, se desconocen con frecuencia estas propiedades generativas de los sistemas de creencias, que es producir nuevos sentidos y entendimientos. Socioculturalmente, la consistencia en los discursos es, sin duda, una virtud muy apreciada e importante en tanto demuestra honestidad y confianza. Las personas, sin embargo, cuentan con numerosos recursos para resolver inconsistencias, según nos ha enseñado, entre otros, la teoría de la disonancia cognitiva (Festinger, 1957).

Existen distintas formas de ver un tema. El contexto de la comunicación, así como ideologías, intereses políticos y económicos, determinan los aspectos visibles de un objeto en cada momento particular, que a su vez establecen la evaluación del tema. Probablemente la percepción determina el juicio, pero el juicio ayuda a establecer los términos de la percepción. Es esto lo que hace relevante la investigación de los marcos discursivos: el carácter variable y polisémico de la comunicación. El encuadre de un tema o acontecimiento determina la expresión de la representación del objeto en un contexto de comunicación específico. La relación entre descripción y valoración se resuelve cuando se considera al lenguaje como el fenómeno fundamental en la comprensión del mundo.

La pregunta inicial de nuestra investigación fue por el sentido que se puede construir a partir de un acontecimiento inaudito como lo son actos de

extrema violencia, empleando el concepto de marcos discursivos. El ser víctima o testigo de actos violentos altera el equilibrio psicosocial que permite las representaciones porque las explicaciones ante lo desconcertante suelen ser con frecuencia nulas o insuficientes, esto es, falla la simbolización. Lo representable tiene un límite en lo siniestro, que es la paradoja de cuando lo familiar se vuelve aterrador (Freud, 1919/2006). Lo siniestro es la imposibilidad de categorizar una experiencia. La extrañeza de lo familiar (es decir, lo siniestro) abarca tanto relaciones interpersonales como espacios habituales. En el trauma la memoria no se ha podido organizar y necesita de marcos que estructuren el recuerdo. Los marcos facilitarían el restablecimiento del equilibrio mediante la construcción comunicativa de formas de entender un acontecimiento. Por lo tanto, los marcos permiten comprender una situación, establecer los términos de su valoración y servir de guía para la orientación de la acción.

En los relatos analizados, los marcos genéricos obtenidos por medio del análisis factorial de correspondencia, de hechos, actores y causas posibilitaron a los habitantes de San Carlos y El Salado organizar los relatos. Los marcos no son una imposición, sino más bien un proceso socialmente compartido de facilitación del sentido en el que participan distintos agentes con intereses políticos y capacidades diferentes. El vocabulario de los marcos lo patrocinan instituciones gubernamentales y no gubernamentales, agencias de cooperación, académicos y activistas, entre otros, pero requieren de la aprobación y participación de la comunidad. Las ideologías y posturas políticas dominantes establecen y validan marcos desde los que se puede interpretar un objeto. De esa manera los marcos permiten la comprensión del acontecimiento en los ámbitos individual y social. Desde el ámbito colectivo proporciona también los elementos culturales para organizar la narrativa de lo traumático.

En los dos casos considerados, los marcos genéricos que ayudaron a organizar lo que sucedió (o sea, hechos, agentes y causas), se acompañaron de marcos específicos, principalmente episódicos,

que posibilitaron confirmar la comprensión de los eventos. En el caso de El Salado, por ejemplo, los marcos de identificación, masacre y crueldad fueron importantes para iniciar la instalación del trauma, definir víctimas e interpretar esta experiencia desde los procesos de paz, perdón y reconciliación.

Existen dos ámbitos de funcionamiento de los marcos. Uno, básicamente de tipo sociocognitivo, que busca asignarle el sentido a lo confuso o sorprendente. El otro, de tipo cultural, permite instalar la situación. El trauma colectivo requiere de marcos particulares que posibiliten la definición de la situación en términos de trauma. Las preguntas que se responden en un principio se relacionan con los hechos (qué pasó) y las causas (por qué).

Propusimos que la sociedad, a través de distintos componentes, proporciona marcos de asignación de sentido con ayuda de los cuales las personas organizan narrativas que permiten relatar y elaborar acontecimientos trágicos. Las construcciones que de allí resultan son importantes en la orientación de procesos de perdón y reparación. Los marcos transforman lo novedoso, complejo o desconcertante en estructuras de sentido que facilitan la comunicación.

El sentido de un acontecimiento se organiza a través del lenguaje, pero las estructuras que posibilitan comprender lo desconcertante requieren además de la expresión de la vivencia (emocional), lo cual fue menos visible en las entrevistas analizadas. Esto se debe a que si bien se reconoce el nivel colectivo del trauma, este fenómeno solo tiene sentido desde la experiencia individual. Encontramos escasa evidencia en los vocabularios de un lenguaje emocional, espontáneo. Por el contrario, con frecuencia parecían discursos que respondían a expectativas externas, por lo que también valdría la pena estudiar la influencia que ejercen agentes externos en las interpretaciones que las comunidades hacen de acontecimientos violentos y sus consecuencias.

Un resultado podría ser narrativas que impresionen como ajenas, en tanto responden a expectativas de otros. Este fenómeno fue descrito

por Greenspan (1998) en las víctimas del Holocausto como ritualización del testimonio. En todo caso, los marcos interpretativos son una coconstrucción que se desarrolla entre entrevistado y entrevistador y demuestra el carácter compartido de la construcción de sentido, aun si dicha construcción está mediada por relaciones de poder. Es importante destacar que las entrevistas analizadas en esta investigación fueron realizadas por el CNMH y por lo tanto estaban mediadas institucionalmente.

Los marcos de asignación de sentido, que son una construcción colectiva, proporcionan también el continente sobre el que es posible proyectar fantasías y experiencias personales. Dichos marcos interpretativos actúan como consensos, formas colectivas sobre las que es factible construir una experiencia personal y comunicarla. Existe una teoría de la instalación que hace referencia a la reproducción y transformación de la estructura social por medio de prácticas y comportamientos individuales (Lahlou, 2018). Se trata de una perspectiva evolutiva y señala que las sociedades proporcionan el andamiaje desde el que se encuadra el comportamiento, orientándolo y constriñéndolo.

Sin embargo, en este artículo no hicimos referencia a la instalación como el proceso evolutivo en que se dan procesos de transformación y cambio. En nuestra perspectiva, la instalación es un encuadre simbólico, un arreglo socioinstitucional de creación de sentido que da respuesta a necesidades específicas de un grupo o una comunidad. En cuanto esta investigación pudo mostrar, la necesidad la constituyó el rompimiento de las funciones de los sistemas de representación social (esto es, integración, conocimiento, identidad, etc.), por la irrupción de lo trágico. La instalación es la interpretación situacional de una experiencia.

Las consecuencias psicológicas y psicosociales de la violencia y el conflicto armado en Colombia están documentadas, por ejemplo, por Hewitt Ramírez et al., 2016. En este artículo hemos propuesto el concepto de instalación del trauma como estrategia de contención psicosocial

en comunidades que enfrentan tragedias. La contención psicosocial provee elementos de sentido, seguridad y participación necesarios para la salud y bienestar de las comunidades.

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doi: <https://doi.org/10.15446/rcp.v32n1.96322>

The Role of Third Parties in Cyber Conflicts: The SIMA Simulator

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How to cite this article: García-Vargas, L., Durán-Aponte, E., & Chaux, E. (2023). The role of third parties in cyber conflicts: The SIMA simulator. *Revista Colombiana de Psicología*, 32(1), 67-81. <https://doi.org/10.15446/rcp.v32n1.96322>

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SCIENTIFIC RESEARCH ARTICLE

RECEIVED: JUNE 01, 2021—ACCEPTED: JULY 05, 2022

Abstract

New media creates opportunities to directly measure how adolescents respond to aggressive situations. In this study, we report on SIMA, a simulator of digital chats, created to mimic online aggressive interactions within a conflict situation. Adolescents were invited to be part of a digital chat where all interactions were pre-programmed, except for the participants' interventions, to discuss controversial topics (e.g., animal maltreatment). Two chat members engaged in a conflict programmed to escalate quickly through aggressive insults. Sixth and seventh-grade students (mostly aged 12 to 14; $n = 287$) from one public school (low SES) and one private school (high SES) participated in the study. Responses to open questions after finishing the chat suggest that the great majority considered that they were taking part in a real online interaction. Aggressive offenses towards other members of the chat were very common. SIMA opens many options for further research about bystander behavior in aggressive online interactions.

Keywords: cyberaggression, chat, online aggression, conflict, pedagogical intervention.

El Papel de los Terceros en los Conflictos Cibernéticos: el Simulador SIMA

Resumen

Los nuevos medios de comunicación han creado oportunidades para medir directamente cómo los adolescentes responden a situaciones de agresión. Presentamos a SIMA, un simulador de chats digitales creado para imitar interacciones agresivas en línea en una situación de conflicto. Los adolescentes son invitados a ser parte de un chat digital para discutir temas controversiales (p. ej., maltrato animal). En realidad, las interacciones están todas preprogramadas a excepción de las intervenciones de quienes participan. Dos supuestos miembros del chat tienen un conflicto programado para escalar de forma rápida con insultos agresivos. Participaron estudiantes de sexto y séptimo grado (principalmente de 12 a 14 años; $n = 287$) de un colegio público (NSE bajo) y uno privado (NSE alto). Las respuestas a preguntas abiertas sugieren que la gran mayoría consideró que estaban participando en una interacción en línea real. Las ofensas agresivas hacia otros miembros del chat fueron muy comunes. SIMA abre muchas opciones para futuras investigaciones sobre el comportamiento de espectadores en interacciones agresivas en línea.

Palabras clave: ciberagresión, chat, agresión virtual, conflicto, intervención pedagógica.

Introduction

CYBER AGGRESSION is unfortunately very common in the everyday lives of many adolescents, and it can be very harmful -even more so than face-to-face aggression- to those subject to it (Sticca & Perren, 2013). Observation and measurement are crucial to understanding cyber aggression and to design better prevention strategies. However, to measure aggression (any action intended to harm others; Parke & Slaby, 1983), or any reaction to it, be it as a victim or a bystander (Macháčková, Dedkova, Sevcikova, & Cerna, 2018), is a great challenge. Many scientific studies of aggression and cyber aggression are based on self-reports (e.g., Burt & Alhabash, 2018; Kim et al., 2020; Kokko et al., 2014; Martínez, Rodríguez-Hidalgo, & Zych, 2020; Menin, Guarini, Mameli, Skrzypiec & Brighi, 2021; Runions, Bak, & Shaw, 2016; Wright, 2017). However, a great limitation of self-reports is the possible social desirability by which participants often do not respond with absolute honesty as they wish to project a positive image of themselves. Another alternative is peer reporting (e.g., Hooijsma, Huitsing, Dijkstra, Flache & Veenstra, 2020), that, although possibly more reliable than self-reporting, can also be biased given that peers may have limited perceptions of the situations, or preferences, and particular relations of friendship with their peers. Reports by teachers (e.g., Dickson et al., 2015) and parents (e.g., Bartels et al., 2018) are common, but they too can be limited, in part because adults often do not find out about situations of aggression that occur between children or adolescents (e.g., Atlas & Pepler, 1998). An important alternative is direct observation of aggressive behavior. Pepler and her group designed a system to observe aggressive situations using wireless cameras and microphones (Pepler & Craig, 1995). By doing so, they were able to measure the frequency of this behaviour very precisely and, as well, identify the social dynamics involved in many of these situations (e.g., Atlas & Pepler, 1998; Craig & Pepler, 1997). However, this methodology is technically complex and requires a great amount

of time, in part, because aggression is usually not so frequent (except during the first years of life; Tremblay, 2002).

Aggression has also been observed in experimental contexts. For example, there are a number of experimental paradigms in which participants can decide on the intensity of a negative stimulus (e.g., noise, electric shock, hot sauce) received by alleged opponents in a competition (e.g., Anderson & Bushman, 1997; Lieberman, Solomon, Greenberg & McGregor, 1999). However, these experiments present limitations too. For example, they differ from common situations where people exercise aggression daily, and this affects the external validity of the experiments, that is, the possibility to generalize the results to other contexts. Anderson and Bushman (1997) argue that this effect is often necessary to guarantee high internal validity; that is, to be sure that the causal relationships between the variables are not due to uncontrolled variables.

To achieve both internal and external validity, it would ideally be necessary to control variables in an experimental context that is very similar to the context where the daily interactions occur. Electronic media present an opportunity to do just this as they provide a specific environment to directly observe aggressive behaviour, and/or reactions to it, in contexts that are similar to how this behaviour occurs daily in current types of aggression, at least, among adolescents. Electronic contexts enable us to simulate very similar interactions to those that occur on social networks and to plan credible aggressive interaction to be able to systematically study participants' reactions to aggressive situations.

In this article, we report the design and early results given by SIMA, a system that simulates online chats and that enables direct observation of adolescents' bystander responses to what they believe is real cyber conflict. We report the reactions of the participants to the SIMA simulator, as well as the evolution over time of their different types of responses and some preliminary findings related to differences by sex, type of school, and topic of the argument.

Given the importance of the role of bystanders in the dynamics of aggression, we focus on their bystander responses to these situations. Observational research as that conducted by Pepler and her group has shown that what peer bystanders do has a great impact on whether the aggression increases or reduces (Atlas & Pepler, 1998; Craig & Pepler, 1998). In fact, several prevention programs have been aimed at promoting assertive (i.e., emphatically defending their own and others' rights but without harming others; Lange & Jakubowski, 1980) and empathetic (i.e., feeling something similar or compatible to what others are experiencing; Hoffman, 2000) bystander intervention (Chaux et al., 2017; Kärnä et al., 2011; Wölfer et al., 2013). We also analyzed responses to situations of cyber conflict given that almost all the studies conducted on the topic have focused on cyberbullying; that is, repeated and systematic cyber aggression against someone, usually in a situation of vulnerability and power imbalance (David-Ferdon & Feldman, 2007; Del Rey, Mora-Merchán, Casas, Ortega-Ruiz & Jaén, 2018; Grigg, 2010; Redondo, Luzardo & Rangel, 2016; Wright, 2015; Wright, et al., 2015). We found no studies on cyber aggression where there is no clear power imbalance among those involved and where aggression could go in both directions, despite that this type of cyber aggression is also very common in the lives of today's adolescents, as pointed out by Corcoran, Mc Guckin & Prentice (2015).

Some studies have shown that it is possible to take advantage of digital contexts to study the way that different variables can affect behaviour. Cheng, Bernstein, Danescu-Niculescu-Mizil & Lezkovec (2017), for example, conducted an experiment where participants interacted on a video chat on controversial political topics (e.g., the 2016 US presidential camping). During the experiment, the researchers sought to manipulate: 1) the participants' mood (before interacting on the chat, half of the participants had to take a very easy quiz, and the other half, a very difficult one); and 2) the context prior to the discussion (half had been subjected

to prior insulting comments, and the other half to neutral comments). Cheng et al. (2017) found that those that began the chat with a negative affect or in a context of having received prior offenses resorted to offenses more frequently than those who received prior positive affect in a neutral context. Therefore they showed that it is possible to influence the frequency of cyber aggression by manipulating the affective and contextual variables.

Similarly, Burt, Kim & Alhabash (2020) developed a simulated chat to measure digital aggression. In a reaction-time game adapted from the Taylor Aggression Paradigm (TAP; Chester & Lasko, 2019), participants received offensive chats from fictitious co-players who they thought were competitors, and their responses in the chat were recorded and analysed. Aggressive responses in their chats were found to correlate significantly to other measures of self-reported aggression and aggressive content in their Twitter posts (Burt et al., 2020; Kim, Clark, Donnellan & Burt 2020).

With this study, we sought to contribute to our understanding of adolescents' behavior in online contexts by piloting a simulator that allows the direct manipulation of the content of the interactions. Specifically, we intended to conduct a pilot implementation of the SIMA simulator and answer the following research questions:

1. How do participants respond to cyber conflict in SIMA?
2. How do participants' different types of intervention evolve during the SIMA dynamic?
3. How much do participants believe that the chat is real?
4. Can SIMA be used to find differences in responses to cyber conflicts according to sex, type of school, or topic of discussion?

Method

Participants

The study population was made up of 287 6th and 7th grade students from one public and one

private school in Bogotá (Colombia) in October 2016. The public school children totalled 172 (82 male and 90 female) and were aged between 10–15 years, whereas the private school students were 115 (61 were male and 54 female) and were aged between 12–14 years. Most of the students from the private school came from high socio-economic families (i.e., 92 % reported coming from strata 4 to 6 out of six SES-strata in Colombia), whereas those from the public school came from low socio-economic levels (i.e., 91% reported coming from strata 1 or 2) and contexts of vulnerability with high levels of community violence.

The sima Instrument

The SIMA (Aggressive Interactions Simulator–Simulador de Interacciones Agresivas) instrument is a simulator designed to lead every participant to believe that he or she is interacting in a real online chat where, in fact, all interventions are previously planned except the participants' interventions. SIMA was constructed using a web application that can be accessed from any computer, tablet or cell phone (the following were used to develop the instrument: nodejs, npm, express, html 5, socket io, and MongoDB for the database; the simulator was uploaded to the OpenShift open source container application platform by Red Hat for the initial pilot tests to generate multiple access for data gathering).

Each participant was randomly assigned to one of four possible interaction topics: animal maltreatment, the environment, tattoos and piercings, and traffic. In the digital chat each participant interacts with three other people whose interventions are predefined by the application.

Each interaction lasts seven minutes and includes 46 interventions by fictitious participants (with intervals of 2 to 15 seconds between interventions). The first interventions are greetings (e.g., "hello everyone") or related to the topic (e.g., "in my neighbourhood, we look after the gardens"). As from interaction 12, two of the fictitious participants make offensive interventions (e.g., "and they

are ignorant, bull-fighters, for example") and they become involved in a dispute that escalates in its level of aggression (e.g., "stop pretending, are you saying that you don't shower and don't throw away rubbish. Where do you keep it, in your pigsty?" in interaction 26; "Stupiiid woman! I would paint your face so you can see how it feels, hahaha" in interaction 43). The four interactions are identical in the 46 interventions in terms of the type of intervention and aggressive escalation. Given that the interactions are previously programmed, the participants' interventions do not modify those of the other three alleged members of the chat group. All the participants' interventions were recorded to be analysed subsequently.

To finish, each student was asked to answer seven open questions on their experience in the chat: "What did you think of the interaction? What did you think of the other people in the chat group? What happened during the interaction? What did you think you would do? What did you do? Did you think of doing something different to what you did? Why didn't you do it?" The main purpose of these questions was to indirectly check whether students thought that the chat sessions were real.

The first version of the interactions was developed based on informal interviews conducted by the first author with students aged 12 to 15. We compiled as many interaction topics to motivate arguments among them, as we did comments, responses, and reactions frequently used in their discussions, based on these we selected the four topics and built the conversations. When the first version of the simulator was ready, a pilot was conducted with nine adolescents who commented on the time between the interventions in the interactions, the terms used, and the formality of some of the responses. All the participants of the pilot test explained that they thought that they were interacting with other adolescents. Their comments were considered when constructing the version of the SIMA used in this study.

In addition to the SIMA instrument we applied a demographic questionnaire (i.e., alias or fictitious

name, age, sex, and socio-economic level of the participants' households), an instrument dealing with the creative generation of options whose results are not presented here, and a 22-item questionnaire on attitudes related to animal maltreatment, the environment, tattoos and piercings, and traffic that sought to reinforce the participants' belief that this was a study of opinions on the topics. These other instruments were applied prior to the SIMA.

Procedure

The instrument was applied to all grades on the same day, in computer rooms at both schools. The different groups participated sequentially so that they would not have time to speak with other students. Each student had his or her own computer and they were asked to sit a determined distance from each other to not be able to see the information entered by other students.

A month before applying the instrument, the students' parents or guardians were sent an informed consent form. Only those students whose parents had signed and returned a consent form were allowed to take part in the study. Only 3 of the 118 students (2.5 %) in the private school and 8 of the 180 students (4.4 %) in the public school did not receive parental consent. Furthermore, before starting the students were told that their participation was voluntary and that they could withdraw from the study at any given point and that only if they agreed with this, they should sign an assent form. None withdrew.

They were given a piece of paper with the Internet addresses they should use to access the instrument. To guarantee randomness, and to avoid them sitting next to other students working on the same topic, the sheets of paper had different addresses for each one of the different topics. The students did not choose the topics they were going to discuss. At the end of the application, they were given a verbal explanation about their interactions not being real.

The study involved deception since participants were made believe that the chat discussion was real. According to APA (2010), deception in

research is only justified if: 1) the study has "prospective scientific, educational, or applied value" and "nondeceptive alternative procedures are not feasible"; 2) it is reasonably expected that the study will not "cause physical pain or severe emotional distress"; and 3) debriefing occurs "as early as is feasible, preferably at the conclusion of their participation". The method complied with these conditions as it represents a substantial improvement in comparison to existing self-report methods, there are no reasons to consider that it can cause any harm, and debriefing occurred immediately after their participation in the simulation.

Data Analysis

Initially, the data gathered were imported to Excel, and then each of the participants' interventions were classified by two coders based on the following eleven categories. Interventions by fictitious participants are presented in braces.

1. Thematic intervention ($KAPPA = .929$): comments on the topic of interaction (e.g., "in my residential complex throwing rubbish is prohibited"; "even if we need it, we mustn't harm the environment").
2. Social interaction ($KAPPA = .933$): greetings, goodbyes, and conventional interactions (e.g., "hello"; "how are you?"; "good thanks"; "goodbye"; "CU").
3. Offends other members of the chat group ($KAPPA = .897$): direct offenses of those who (the participant believes) take part in the interaction (e.g., "you don't even know what you're talking about so, shhhhh"; {Camio4: comon, they're walking like idiots, you are like horses with blinkers on} "that's very true").
4. Offends others who are not members of the chat group ($KAPPA = .914$): direct offenses at others who are not part of the chat group (e.g., "people who don't accept [tattoos] are monsters, I mean it's 2017, accept them already"; "Yes it's true, why did [pedestrians] have to be such animals").
5. Aggressively defends her/himself ($KAPPA = .851$): uses offenses to defend him or herself

and/or tries to deescalate the conflict using offenses (e.g., “it’s not about making yourself feel important, stupid. We all have different tastes and if you don’t want to get a tattoo then just don’t, idiot”; “get lost”).

6. Aggressively defends other members of the chat group ($KAPPA = .881$): uses offenses to defend those who (the participant believes) are part of the interaction (e.g., “and this is why there are campaigns aimed at correcting this, you should read a bit more. You are IGNORANT!!”; “NO, YOU ARE! Killing is not an art”).
7. Aggressively defends others who are not members of the chat group ($KAPPA = .893$): uses offenses to defend someone who is not part of the interaction (e.g., “{AnakinSW: really? The builders are idiots?} “No they are not, they only follow orders... Their bosses are idiots”; “Don’t be so rude, STUPIDDDDD”).
8. Assertively defends him/herself ($KAPPA = .859$): defends him or herself in a non-offensive manner and/or seeks to deescalate the conflict (e.g., “am I less of a human being than you for having a tattoo or piercing?”; “I’m not stupid either and I love tattoos; they are brilliant”).
9. Assertively defends other members of the chat group ($KAPPA = .829$): defends those who (the participant believes) are part of the interaction in a non-offensive manner (e.g., “WOW calm down, you don’t have to go that far...”; “Stop, don’t treat him like that”; “You’re arguing too much, calm down”; “Give her some respect she can express her opinions”).
10. Assertively defends others who are not members of the chat group ($KAPPA = .920$): defends someone who is not part of the interaction in a non-offensive manner (e.g., “We are all free to do what we want as long as we don’t harm others”; “they’re not idiots”; “they’re not animals, it’s just that they were never taught to value nature”).
11. Other interventions ($KAPPA = .784$): not intelligible, not clear what they are referring

to, different possible interpretations, or does not correspond clearly to any other category (e.g., “?????”; “oohhhhh”; “we’ll talk about this tomorrow”).

To verify the consistency of the classifications, an assessment of the inter-observer reliability between two researchers (the first and second authors) was conducted. To do so, the $KAPPA$ coefficient for consistency between observers was calculated for each of the categories. The disagreements were analyzed by all authors, to adjust the definitions of the categories. The procedure was repeated four times until $KAPPA$ coefficients were above .78 for all categories, that means high consistency according to Fleiss (1981).

Once the interventions were well classified, quantitative analyses were conducted based on the cumulative number of interventions per participant for each category. Finally, using one-way ANOVAS, means were compared between types of school (public vs. private), sex (male vs. female) and topics of interaction (tattoos & piercing, the environment, animal maltreatment, traffic).

The participants’ answers to two of the open questions (“What did you think of the interaction?” and “What did you think of the other people in the chat group?”) were assessed independently by the first and second authors depending on whether the answer indicated that they believed that the chat group was real or not: 1) he/she definitely did not believe it to be real; 2) it seems that he/she did not believe it was real (e.g., “a little strange”, “very strange”); 3) he/she is not sure whether they believed it was real (e.g., “I don’t know”; no answer); 4) it seems that he/she did believe it was real (e.g., “they started to fight”, “there were ignorant”); 5) he/she definitely did believe it was real (e.g., “I think that there are some well-educated people and some ignorant people”, “Athena has to change, it’s because of people like her that we are in the mess we are”). The answers of the two evaluators were significantly correlated ($r = .618, p = <.001$). Following this, the two evaluators together reviewed

the classification related to what the difference was 2 points or above (14.6 % of the answers) and they reached a consensus on each one.

Results

Participants' offenses against the alleged members of the chat group were very frequent. On average, each participant used 4.3 offenses during the simulation. The frequency of aggressive interventions increased continually during the interaction. In fact, in the last 10 interactions, there were approximately the same number of offenses as there were in the first 35 interactions (see Figure 1). There were no significant differences between public and private schools (see Table 1), or between male and female (see Table 2). But

differences were observed for topics: those who were assigned to discussion about tattoos made more offensive comments than those who had to discuss environmental topics (see Table 3).

Figure 1. Average cumulative counts for offenses directed at those supposedly in the chat group and others not present in the chat group.

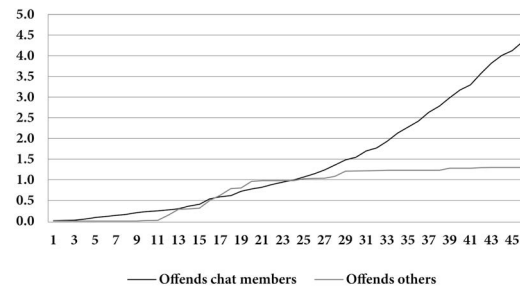


Table 1. ANOVAS for Differences among Students from Private and Public Schools

	Private	Public	F	Sig.
Aggression	6.34	6.52	.06	.802
Offends members of the chat group	3.97	4.59	1.17	.281
Offends others	1.33	1.27	.07	.786
Aggressively defends him/herself	.69**	.37	7.63	.006
Aggressively defends chat members	.16	.16	0.00	.993
Aggressively defends others	.20	.13	1.77	.184
Assertiveness	2.43***	1.27	17.43	.000
Assertively defends him/herself	.37	.41	.22	.640
Assertively defends chat members	1.17***	.51	12.39	.001
Assertively defends others	.90***	.35	20.84	.000
Social interaction	3.76	4.47**	8.79	.003
Thematic intervention	11.61	15.37***	21.06	.000
Other interventions	4.03	4.37	.47	.493

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 2. ANOVAS for Differences between Male and Female Adolescents

	Male	Female	F	Sig.
Aggression	6.44	6.45	.00	.980
Offends members of the chat group	4.49	4.19	.28	.594
Offends others	1.28	1.31	.01	.911
Aggressively defends him/herself	.35	.64**	6.76	.010
Aggressively defends chat members	.14	.17	.51	.476
Aggressively defends others	.17	.14	.40	.526

	Male	Female	F	Sig.
Assertiveness	1.44	2.03*	4.34	.038
Assertively defends him/herself	.33	.45	2.17	.142
Assertively defends chat members	.70	.85	.65	.421
Assertively defends others	.42	.72*	6.37	.012
Social interaction	4.20	4.16	.03	.865
Thematic intervention	13.16	14.57	2.89	.090
Other interventions	4.17	4.30	.07	.786

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 3. ANOVAS for Different Topics of Interaction Assigned

	Environment	Animal maltreatment	Tattoos & piercing	Traffic	F	Sig.
Aggression	6.00	6.77	6.74	6.10	.34	.800
Offends members of the chat group	3.26 ^b	4.14	5.55 ^a	3.86	3.11	.027
Offends others	2.15 ^a	2.08 ^a	.01 ^b	1.47	34.39	.000
Aggressively defends him/herself	.54	.14 ^b	.75 ^a	.49	5.48	.001
Aggressively defends chat members	.02 ^b	.30 ^a	.16	.12	4.74	.003
Aggressively defends others	.04 ^b	.11	.27 ^a	.15	3.46	.017
Assertiveness	1.22 ^b	1.11 ^b	2.58 ^a	1.68	6.57	.000
Assertively defends him/herself	.39	.37	.44	.36	.20	.986
Assertively defends chat members	.43 ^b	.31 ^b	1.35 ^a	.79	7.16	.000
Assertively defends others	.41	.44	.80	.53	2.37	.071
Social interaction	5.07 ^a	5.44 ^a	3.18 ^b	3.52 ^b	29.58	.000
Thematic intervention	13.02	13.24	13.92	15.01	1.10	.349
Other interventions	3.91	3.86	4.34	4.71	0.63	.593

Note: Cells with different letters (superscript) represent significant differences ($p < .05$) in Bonferroni post hoc test.

Offenses against those who were not part of the chat were less frequent (1.3 on average) and they were concentrated in the second quarter of the time for the interaction (see Figure 1); that is, when the planned offensive comments began (e.g., 12: “and, they are ignorant, for example, the bullfighters...”; 13: “and what about those who go to see bullfighting? Are they ignorant too?”). There were no differences between types of school or between sexes (see Tables 1 and 2), but differences were observed for topics: those who discussed environmental topics or animal maltreatment

offended others to a significantly greater extent than those who argued about tattoos (see Table 3).

As can be seen in figures 2 and 3, defending assertively him/herself and the other members of the chat increased substantially in the second half of the simulation. Assertively defending chat members was two times more frequent than assertively defending themselves. In contrast, aggressively defending themselves was more than three times more frequent than aggressively defending chat members. Significant and substantial differences were found between the types of school in three categories

related to the defence. In particular, interventions that assertively defended members of the chat session, assertively defending others who were not in the chat groups, and the participants aggressively defending themselves were much more common among participants from public schools (see Table 1). On the other hand, assertively defending others who were not in the chat group and aggressively defending themselves were much more common among female than male participants (see Table 2).

Figure 2. Average cumulative counts for assertively defending themselves, defending those supposedly in the chat group, and defending others not present in the chat group.

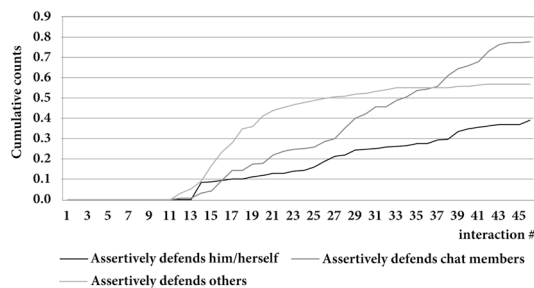
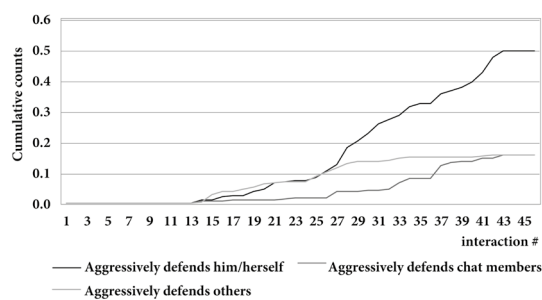


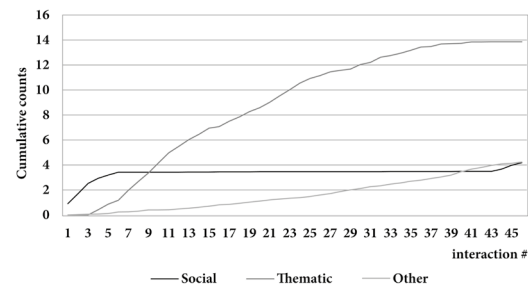
Figure 3. Average cumulative counts for aggressively defending her/himself, aggressively defending other members of the chat group, and aggressively defending others who are not members of the chat group.



Both conventional social interactions, and thematic interventions were more frequent among public school students than among private school students (see Table 1). We found no significant differences by sex (see Table 2). Social interactions occurred almost exclusively in the first 6 and last 3 iterations, whereas the thematic interventions were

more frequent in the first interactions than in the last. Less than 10 % of the thematic interventions took place in the last quarter of the time allocated to the interaction (see Figure 4).

Figure 4. Average cumulative counts for social, thematic, and other unclassified interventions.



After finishing the chat, the participants were asked to answer open questions. An analysis of their answers to the questions “What did you think of the interaction?” and “What did you think of the other people in the chat group?” indicated that the majority seemed to have believed that the chat session was real. None of the answers indicated that they had not believed that the interaction was real, and only 8.3 % of the participants responded in a way that suggests that they may have suspected that the interaction was not real (e.g., “it was a bit strange”; “very strange”). In contrast, 69 % responded in ways that suggest that they did think that the interaction was real (e.g., “they are very disrespectful”; “some of them are respectful but they become aggressive when defending their point of view”).

Discussion

Electronic media provide a great opportunity to directly measure behaviour in digital contexts like those where a large part of today’s interactions among adolescents take place. These measurements can be much more reliable than some methods currently used to measure behaviour in contexts of aggression, as self-reporting or reports by adults. They allow this analysis to be conducted

in a context where variables can be manipulated to directly observe the causal effect of certain variables on behaviour. For example, specific variables could be manipulated to see whether this influences the participants' behaviour (e.g., whether those who received an intervention to promote empathy intervene more when it comes to deescalating conflict). Anderson and Bushman (1997) suggest that when seeking to increase external validity (i.e., results that can be generalized to real contexts) conducting studies in real contexts often ends up affecting internal validity (i.e., being confident that the variables are, in fact, casually related) given that in real contexts it is impossible to control the variables that can affect the results (e.g., confound variables). Computer simulations like the ones presented here simultaneously allow high internal and external validity, given that they can be conducted in experimental contexts where the variables are well-controlled and, at the same time, in context similar to real ones where online interactions take place on a daily basis. The fact that most of the participants seemed to have believed that they were taking part in a real online conversation indicates that simulators like SIMA have great potential to simultaneously achieve both types of validity.

In this study, we found that cyber aggression was very common. Following the thematic interventions, the offenses against the other (alleged) participants in the chat group were the most common interventions. On average, each participant wrote more than 6 offenses, 4 of which were directed at other members of the chat group. Also, 85 % of the participants wrote at least one offence. This highlights a worrisomely high frequency of aggression, being consistent with studies that suggest that the distance to the victim and anonymity on social networks favour the use of aggression (Arab & Díaz, 2015), in part, because online contexts seem to be associated with lower levels of empathy (Carrier, Spradlin, Bunce & Rosen, 2015).

No differences by sex were found in terms of the total amount of cyber aggression. This is

consistent with studies carried out in different cultures that show that there are few differences between men and women in the frequency of indirect aggression (i.e., when the victim does not know who began the aggression), in contrast to direct physical and verbal aggression that is more common among men than it is among women (Card, Stucky, Sawalani & Little, 2008; Österman et al., 1998; Salmivalli & Kaukiainen, 2004). In this case, the anonymity of chats allows people to offend others assuming that victims will never know who offended them. More studies are needed to verify whether this lack of difference between men and women also occurs in other cultures.

Assertive bystander intervention is fundamental to stopping situations of aggression in face-to-face contexts (Atlas & Pepler, 1998; Craig & Pepler, 1997; Salmivalli, 2010, Salmivalli, 2014) and probably also in online contexts (Constantino & Álvarez, 2010). In this study, however, only 38 % of the participants intervened assertively to defend those who they thought were other adolescents being victims of cyber aggression. Also, these assertive interventions were significantly more frequent between students from the private school than those from the public school. It is not clear whether this difference is associated with more empathy or assertiveness among students from the private school, with a different perception of the seriousness of the offenses, or something else. In fact, many comments from the students from the public school suggest that some of them did not consider that the attacks were particularly alarming. For example, when asked what happened during the interaction, one of the participants answered, "nothing important", and another, "a few fights but it was very entertaining". It would be interesting to conduct a qualitative exploration of whether the students from different contexts could be interpreting the level of seriousness of the offences differently and, therefore, the need to intervene to defend those being attacked. The results also showed a greater frequency of assertive interventions among female adolescents than male

adolescents, when assertively defending other people that were not part of the chat group (e.g., youngsters with tattoos). Another important element to explore in future studies is whether this difference is associated to greater sensitivity or empathy, a greater capacity to intervene assertively or some other difference.

It is important to recognize that the study had several limitations that could be corrected in future versions. On the one hand, answers to the open questions suggest that the great majority of participants believed that the chat session was real, but we cannot rule out that some may have realized that it was a simulation. For example, some students may have seen their classmates' chats and discovered that they had very similar interactions in the public school where there was very little space from one computer to another. We tried to avoid this by staggering the topics between the computers and changing most of the aliases of the fictitious characters, but we cannot rule out that they may have seen each other's interactions anyway. Future technological adjustments will help to minimize the possibility of these risks occurring.

Another limitation of this study is that the classification of the participants' interventions depended on our interpretations of them. We may have misunderstood what the participants might have wanted to say. This is particularly possible given the ambiguity in short interactions typical of online chat sessions, as well as the generational difference between participants (adolescents) and the assessors (adults). Even though the KAPPAS obtained were high, we cannot ensure that what coders interpreted in a coherent manner correspond to what the participants intended to say. Additionally, coders were conscious of the hypotheses of the study, which could have biased their interpretations. Furthermore, it was necessary that coders reached agreements related to some of the entries since students used local expressions that were not known by both researchers. For this reason, coding was not totally independent and KAPPAS may be overestimated. Future studies might

need independent coders, closer in age to the participants, from their local contexts, and unaware of the hypotheses of the study. Interviewing the participants associated to their interventions may help to confirm the validity of the interpretations. Also, future studies could include emoticons to highlight the participants' emotional experiences during the chat session.

We also found significant differences in some of the categories among the groups assigned to different topics of interaction. For example, there were more assertive interventions amongst those assigned the topic of tattoos than among those assigned the topic of animal maltreatment and the environment. This is surprising given that the interventions of the alleged peers were planned to be equivalent in terms of the type of intervention (e.g., topic), their level of aggression, and when these took place. It is possible that the different topics may have aroused different levels of empathy and, therefore, different dispositions to intervening assertively to defend the alleged participants of the chat group. Future research should determine whether it is possible to obtain greater coherence among the discussion topics, or whether the simulation should be limited to single topics to guarantee comparability between the interventions by the different participants.

Another important aspect to explore in future research is a possible adaptation of the system to simulate other types of situations. In fact, we have already constructed a variation to the system that corresponds more closely to a situation of cyberbullying than one of cyber-conflict. In the situation reported here, the aggression is bilateral and there is no clear power imbalance between the two mutually aggressive alleged peers. This corresponds more to a situation of conflict than it does one of bullying (Chaux, 2012). In contrast, in cyberbullying, all the aggression of the alleged peers is directed at one specific peer who, in turn, does not seem to be able to defend him/herself in a clear show of power imbalance. We do not know yet whether cyberbullying or cyber-conflict

generates more assertive interventions by the participant-bystanders.

Despite the limitations, SIMA provides a great opportunity to directly explore adolescents' behaviour in digital spaces very similar to those where situations of aggression occur on a daily basis. These simulators could lead to a new drive towards research in social psychology that could not previously be conducted for ethical reasons (e.g., Burger, 2009). In addition to its usefulness as a methodological tool through which to observe behaviour, the simulator has many practical implications. On the one hand, it could be used to assess the impact of programs aimed at promoting assertive bystander intervention in situations of online aggression. On the other, it can serve as a pedagogical strategy; for example, for students to practice how they could assertively intervene in situations of online aggression, as the system would allow them to analyse their own reactions and identify what they could improve on and how. Finally, identifying variables that can explain the bystander behaviour in situations of cyber aggression can inform future programs where variables should be taken into account to further promote assertive bystander intervention. All this can contribute not only to a better understanding of aggression but also to promoting more peaceful and constructive online environments.

Acknowledgments

We are very grateful to all the adolescents who very willingly participated in the study, as well as with their parents, teachers, and schools. We thank all the colleagues and reviewers who carefully read the study and offered insightful suggestions. We are also very grateful for the financial support provided by Pontificia Universidad Javeriana–Bogotá, Universidad Simón Bolívar–Caracas, and Universidad de los Andes–Bogotá.

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doi: <https://doi.org/10.15446/rcp.v32n1.92739>

Green Products Purchase Intention in Chilean Consumers: Comparing Three Models Using Structural Equations

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How to cite this article: Sandoval-Díaz, J., & Neumann, P. (2023). Green products purchase intention in Chilean consumers: Comparing three models using structural equations. *Revista Colombiana de Psicología*, 32(1), 83-101. <https://doi.org/10.15446/rcp.v32n1.92739>

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SCIENTIFIC RESEARCH ARTICLE

RECEIVED: JUNE 13, 2022—ACCEPTED: JULY 13, 2022

Abstract

The objective of this study was to compare three models: the theory of reasoned action (TRA), the theory of planned behavior (TPB), and its extended form (ETPB), to predict the intention of Chilean consumers for purchasing green products. Five hundred people were surveyed, establishing an inter-rater reliability analysis, and a discriminant, convergent and construct validity using three structural equation models (SEM). The results showed that the ETPB model is useful to explain the consumption behavior intention for green products based on a triple bottom line, whose main contribution is the indirect effect of environmental concern (EC) on the model. The study found that of the three variables, perceived behavioral control (PBC) was the strongest predictor of purchase intention (PI), followed by attitude (ATT). In conclusion, both the ETPB model and the green products purchase intention instrument contribute to broaden the studies about consumer behavior in sustainable marketing in Chile.

Keywords: green products, purchase intention, theory of planned behavior, environment scale, structural equation modeling.

Intención de Compra de Productos Ecológicos en Consumidores Chilenos: Comparación de Tres Modelos por Ecuaciones Estructurales

Resumen

El objetivo del presente estudio fue comparar los modelos de teoría de acción razonada (TAR), teoría de comportamiento planificado (TCP) y su forma extendida (TCPE), para predecir la intención de compra de productos ecológicos en consumidores chilenos. Se encuestaron 500 personas y se estableció un análisis de fiabilidad interjuez, validez discriminante, convergente y de constructo a través de modelos de ecuaciones estructurales (SEM). Los resultados señalan que el modelo TCPE es útil para explicar la intención de comportamiento de consumo ante productos verdes con base en una triple línea de fondo, cuya principal contribución es el efecto indirecto de preocupación ambiental (PA) sobre el modelo. De las tres variables, se evidencia que el control conductual percibido (CCP) era la predictora más fuerte de la intención de compra (IC), seguida de la actitud (ACT). En conclusión, tanto el modelo TCPE como el instrumento de intención de compra de productos verdes contribuyen a la ampliación de estudios sobre el comportamiento del consumidor en *marketing* sustentable en Chile.

Palabras clave: productos verdes, intención de compra, teoría de comportamiento planificado, escalas ambientales, modelo de ecuaciones estructurales.

Introduction

DURING THE last few decades, care and concern for the environment have turned into one of the main priorities for sustainable development at a global scale. This is reflected in the growing number of international policies oriented towards the protection of the environment —with the Sustainable Development Goals of the United Nations (UN) as a prime example (UN, 2015)— and an increasing public interest in adopting a lifestyle that generates the lowest possible environmental impact (Vita et al., 2019). In this context, much of the environmental impact of the population is associated with consumption behaviors and the processes used for the elaboration of consumed products. In other words, most of the environmental impact is not caused directly by household activities, but generated during the production of consumption goods. For example, in a recent study Yin et al. (2020) observed that the consumption of goods such as food, clothes and services represents around 64% of the household carbon footprint in Beijing. Similarly, Vanham, Gawlik and Bidoglio (2019) found that in Hong Kong households, the indirect use of water associated with the consumption of food is around 15 times higher than direct water consumption. This trend has been observed in practically all the regions of the world, with environmental footprints related to consumption accounting for more than 84% of total environmental impacts of the population (Tukker et al., 2016). In the case of Latin America, this situation is also characterized by a significant inequality between countries, as happens within the socioeconomic sectors of these nations (Zhong et al., 2020).

Moreover, at an operational level, a more sustainable pattern of consumption can be achieved by encouraging the purchase and utilization of green or ecological products. Even though there are diverse definitions of what is understood by “green products”, a simple yet clear definition is provided by Sdrolia and Zarotiadis (2018), who, based on an extensive review and acknowledging the fact

that no product is free of environmental burdens, define a green product as any product (tangible and intangible) that *minimizes* its environmental impact (direct or indirect) during its entire life cycle and is subject to current scientific and technological status. Considering that both production and contextual elements regarding consuming decisions can have a significant effect on the environment, understanding the sociocultural and psychosocial factors of a green product purchase decision process becomes of great importance for the development of multiscale sustainable strategies (Singh & Gupta, 2013). In this line, behavioral scientific studies are fundamental to develop strategies to inform consumers about the environmental consequences of their consumption decisions, guiding them on the basis of Life Cycle Assessment (LCA) and other environmental analysis tools towards more sustainable attitudes, practices, and behaviors (Polizzi et al., 2016; Steg & Vlek, 2009).

Considering the above, even though pro-environmental behaviors such as green product consumption has been studied in Euro-American and Asian countries (Alzubaidi et al., 2020; Gatersleben et al., 2014; Paul et al., 2016) to the best of our knowledge there is a lack of studies focusing in Latin American consumers, specifically the Chilean population.

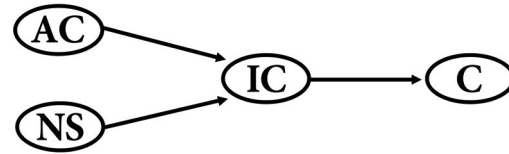
Chile is characterized by having one of the highest environmental impacts per capita in Latin America, with an estimated carbon footprint of 6.24 tons of CO₂ equivalent per year per person in 2018, compared with an average of 4.95 tons of CO₂ equivalent per year per person in the Latin American and Caribbean region (The World Bank, 2020). Regarding environmental concern, according to data from a recent international study (Électricité de France [EDF], 2019), 80% of the respondents perceive a bad environmental situation (above the world average, which is 54%). Likewise, 65% of the Chileans are “much more concerned” about this issue than they were five years ago, a figure that reaches a world average of 37% (EDF, 2019). However, this perception of the relevance of environmental issues has not been

translated to an operational characterization of the psychosocial factors that influence the adoption of sustainable practices, such as attitudes and intentions of ecological behaviors (Gifford, 2014). This is an important step for the successful implementation of environmental policies that require societal-wide adoption.

In line with these antecedents, the last reports of the Intergovernmental Panel on Climate Change (IPCC, 2018; 2019) highlight the relevance of directing the research efforts to better comprehend and potentially modify the behavior intentions towards more sustainable lifestyles. According to Ajzen (2002), if people evaluate the objective behavior as positive (attitude), there will be a higher intention (motivation) for the actual performance of the behavior. This main idea drives the development of different theoretical-conceptual models that can be used to understand the consumer's purchase behavior of green products (Albayrak et al., 2013).

Theory of reasoned action [TRA] (Fishbein & Ajzen, 1975). The TRA model is utilized to assess non-rutinary decisions, using psychological/cognitive processes to comprehend the contextual decision making of consumers (Han & Kim, 2010). Its central principle is *behavioral intention* (BI), understood as the disposition towards the performance of the behavior in question (Ajzen, 1985). According to this model, the *purchase intention* of green products would indicate up to what point consumers would be disposed/prepared to buy green products or to adopt more sustainable options/choices (Paul et al., 2016). In operational terms, BI is determined by both a) *attitudes* (ATT), or evaluations and beliefs about this behavior; and b) *subjective norms* (SN), or the normative reasoning related to the social pressure to engage in behavior expected by the group of belonging (Figure 1).

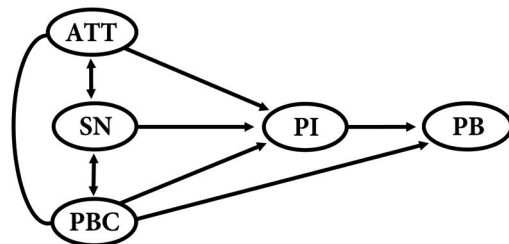
Figure 1. Theory of reasoned action.



Note: ATT = attitude; SN = subjective norm; PI = purchase intention; PB = purchase behavior.

Theory of planned behavior (TPB) (Ajzen, 1985). When restrictions over actions cannot be predicted based only on intention (TRA model), the *perceived behavioral control* (PBC) allows us to examine the influence of personal, social, and non-volitive determinants over the purchase intention, something that greatly increases the predictability of the TRA model (Han et al., 2010). In the case of green products consumption, the TPB model evaluates the potential relationship between the behavior intention and the psychological/cognitive determinants (Jebarajakirthy & Lobo, 2014) (Figure 2).

Figure 2. Theory of planned behavior.

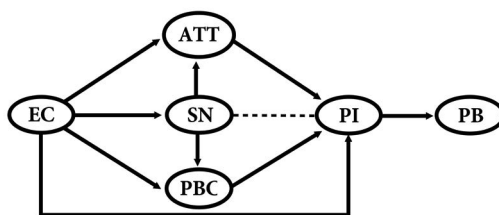


Note: ATT = attitude; SN = subjective norm; PBC = perceived behavioral control; PI = purchase intention; PB = purchase behavior.

Extended theory of planned behavior (ETPB) (Paul et al., 2016). Although TPB presents a vast amount of empirical evidence backed by diverse

fields and areas (Ajzen, 2006), for Paul et al. (2016) the context where potential ecological consumers are located (defined by factors such as country and social group) can condition the voluntary control over behaviors. Thus, incorporating to the model the *environmental concern* (EC) as a determining factor provides a better understanding of green products purchase intention in developing countries (Paul et al., 2016). EC is defined as the set of people's values, feelings, and beliefs for the environment (and its socio-natural assemblage), their emerging problems, and their individual and collective willingness to solve them (López-Miguens et al., 2014) (Figure 3). Considering the role that context can have over ecological consumption, it is likely that consumers in developing countries do not have or perceive a voluntary control over decisions related to green products purchase. Therefore, the applications of this type of models should be validated case to case (Paul et al., 2016).

Figure 3. Extended theory of planned behavior.



Note: EC = environmental concern; ATT = attitude; SN = subjective norm; PBC = perceived behavioral control; PI = purchase intention; PB = purchase behavior.

Against this background, the overall objective of this study is to compare the empirical adequacy of TRA, TPB, and ETPB models for green product purchase intention in Chilean population. In terms of the relevance of this work, it is important to note that psychological research on this topic is still incipient in Latin America (Medina, 2021), therefore it is necessary to develop and validate instruments and methodologies concordant with

the main socioenvironmental issues that exist at regional and national levels (Reveco-Quiroz et al., 2022). To achieve this, we analyzed the reliability and validity of the GP (green products) scale in Chilean population, as the models based on these theories are country specific and difficult to understand outside their original context (Lee & Green, 1991; Paul et al., 2016). Finally, we expect that the results of this study provide relevant knowledge about the determining factors of pro-environmental behavior in Chilean consumers. This information, combined with the results of LCA studies and other environmental impact assessment tools, should form the basis for the successful implementation of policies that encourage sustainable consumption.

Methodology

This was a non-experimental, cross-sectional, descriptive, and correlational study that adapted and assessed the psychometric properties of a scale (León & Montero, 2015). In particular, it examined the adaptability, reliability, and validity of a scale that measures the intention to purchase green products (Paul et al., 2016).

Participants

The criteria used to select the sample size ($n = 480$) was established based on the recommendation of Hair, Anderson, Tatham, & Black (2010) considering a minimum of 15-20 participants per item for the realization of the structural equations model (SEM). The original scale for the determining factors of green products purchase intention (Paul et al. 2016) is made of 24 items. In this regard, we used a non-probabilistic sample by selecting 500 participants, which had to meet the following inclusion criteria: a) being 18 or more years old, b) residing in the Ñuble region (Chile), and c) voluntarily agreeing to participate in this study. The socio-demographic characteristics of the participants are detailed in Table 1.

Table 1 Socio-demographic characteristics of the sample divided by sex

		Female n (%)	Male n (%)	Total n (%)
Total		328 (65.6)	172 (34.4)	500 (100)
Residence				
	Urban	285 (57)	150 (30)	435 (87)
	Rural	43 (8.6)	22 (4.4)	65 (13)
Age				
	18-30	109 (21.8)	80 (16)	189 (37.8)
	31-40	52 (10.4)	26 (5.2)	78 (15.6)
	41-50	87 (17.4)	29 (5.8)	116 (23.2)
	51 or more	80 (16)	37 (7.4)	117 (23.4)
Educational LevelCompleted				
	Primary	55 (11)	26 (5.2)	81 (16.2)
	Secondary	171 (34.2)	97 (19.4)	268 (53.6)
	University	102 (20.4)	49 (9.8)	151 (30.2)
Income				
	One minimum income *	203 (40.6)	81 (16.2)	284 (56.8)
	Two minimum incomes	53 (10.6)	31 (6.2)	84 (16.8)
	Three minimum incomes	27 (5.4)	18 (3.6)	45 (9.0)
	Four or more minimum incomes	45 (9)	42 (8.4)	87 (17.4)
Employment				
	Unemployed and/or studying	131 (26.2)	52 (10.4)	183 (36.6)
	Simple jobs	59 (11.8)	33 (6.6)	92 (18.4)
	Technical jobs	57 (11.4)	39 (7.8)	96 (19.2)
	Professional jobs	72 (14.4)	41 (8.2)	113 (22.6)
	Highly specialized jobs	9 (1.8)	7 (1.4)	16 (3.2)

* Note: Since March 1, 2020 the gross amount is \$318,000 Chilean pesos, equivalent to \$476.56 dollars (Law No. 21.112).

Instruments

Sociodemographic survey. A sociodemographic characteristics instrument was elaborated. It included: a) place of residence, b) gender, c) age, d) educational level, e) monetary income, and f) employment, and was based on the survey format of the National Socio-Economic Characterization Survey (CASEN in Spanish) (Ministerio de Desarrollo Social y Familia, 2018).

Green products scale. This instrument consists of 24 items derived from the extended theory of planned behavior proposed by Paul et al. (2016). The scale is subdivided into dimensions and consists

of: a) three items of *attitude* (for example, “I like the idea of purchasing green products”); b) four items of *subjective norm* (for example “People who are important to me think that I should purchase green products”); c) seven items of *perceived behavioral control* (for example, “I believe I am capable of purchasing green products”); d) five items of *environmental concern* (for example, “I am very concerned about the environmental problems”); and e) five items of *purchase intention* (for example, “I will consider buying less polluting products in the future”). A five-point Likert scale was used for each item, where 1 = *strongly disagree* and 5 = *strongly agree*. Regarding Cronbach’s alpha internal consistency, the five dimensions (constructs) of the

original study presented high values in the range of α 0.79 and α 0.91.

Ethical considerations

The validation of the scale is part of the research project DIUBB 186009 3/I “Consumo sustentable de bolsas de transporte de productos en el comercio: evaluación ambiental del ciclo de vida asociado a los patrones del comportamiento de la población”, which was revised and approved by the Ethics Committee of the Universidad del Bío-Bío Research Directorate.

Procedures

Down below we present the procedure performed to assess the psychometric properties of the scale:

Instrument administration. Data were collected by undergraduates of psychology and natural resources engineering programs, who were trained to apply the instruments considering the following aspects: a) clarification of objectives, b) an informed consent, c) confidentiality, d) application time, and e) emerging questions. The instrument was individually applied to households or their spouses, provided that they met the inclusion criteria and were willing to participate in the study. The application was performed in a single moment between July and December 2018 in the respondents' residence and had an average duration of 20 minutes. Before filling out the instrument, the participants read and signed an informed consent that contained information about the research and its objectives.

Statistical analysis. Different types of statistical analysis were implemented. They are described below:

Inter-rater reliability. Fleiss' kappa coefficient was initially applied to the analysis of content validity agreement, a variable used for more than two raters (Falotico & Quatto, 2015). However, this coefficient could present biased results and not

be a good indicator of inter-rater agreement, as evidenced by the prevalence of higher categories over the lower ones (Abad et al., 2011). For this reason, the Randolph's free-Marginal multirater kappa (2005) was used, with Gwet's variance formula (2010), which was obtained using an online kappa calculator (Randolph, 2008). Regarding the interpretation of this coefficient, its minimum value is 0 and its maximum is 1, with the following strength of agreement ranges: a) 0.00 = poor, b) 0.10–0.20 = slight, c) 0.21–0.40 = fair, d) 0.41–0.60 = moderate, e) 0.61–0.80 = substantial, f) 0.81–1.0 = Almost perfect (Landis & Koch, 1977).

Descriptive statistics and internal consistency reliability. Originally, a descriptive analysis was carried out for each item and its respective dimension. Subsequently, the omega coefficient (ω) was used in the internal consistency analysis for the five dimensions of the scale (McDonald, 1999). The corrected item-total correlation was examined through the free graphic software JASP version 0.11.1.

Convergent and discriminant validity. On the one hand, for convergent validity, Bagozzi, Yi and Phillips (1991) recommend that the standardized factor loadings, at a subscale-item level, should be significant and present values higher than 0.5, as well as a composite reliability higher than 0.7 (Hair et al., 2010). On the other hand, for discriminant validity, Fornell and Lacker (1981) suggest verifying if the square root of the average variance extracted of each dimension is higher than the square of the correlations between sub-dimensions.

Structural Equations Modeling (SEM). A confirmatory factor analysis (CFA) was carried out to compare the theoretical models about the structure of green products purchase behavior (Hair et al., 2010), using the Mplus v8 software. For the CFA, the robust weighted least squares method (ULSMV) through polychoric correlations was used to correct possible problems related to the normal distribution. To contrast model validity and to

make a comparison between rival models (Hair et al., 2010), the following goodness fit indexes were calculated: a) χ^2 (chi-square), b) χ^2/df (coefficient of χ^2 divided by the degrees of freedom), c) robust comparative fit index (CFI), d) (Tucker-Lewis index) TLI, and e) root mean square error of approximation (RMSEA). According to Browne and Cudeck (1993) and Hair et al. (2010), a model is adequate when it presents the following indexes ≥ 0.90 , χ^2/df between 2 and 5 and $RMSEA \leq 0.08$.

Results

Procedures of adaptation and validity of content of the scale

The original version of the scale was first translated to Spanish by the authors of this article and an English-Spanish translator. This process involved carrying out a semantic adaptation of its 24 items while trying to preserve the sense and clarity of the original questions. The scale was later sent to four faculty members of Chilean universities with five or more years of experience in teaching and research in the environmental field and a master's or doctorate degree. These judges, who were intentionally selected, belonged to different disciplines: psychology $n = 2$,

sociology $n = 1$, and environmental engineering $n = 1$. They received an e-mail with the instrument and the assessment form in June 2018 and a request for submission within two weeks. The four judges agreed voluntarily and free of charge to participate in the content validation of the instrument.

The assessment of the scale, grouped into the four original dimensions, was conducted for each item using the experts' assessment form proposed by Escobar-Pérez and Cuervo-Martínez (2008) that includes the areas of *sufficiency*, *clarity*, *coherence*, and *relevance*, and establishes four evaluation options: does not meet the criterion, low level, moderate, and high level. The assessment also considered the judges' qualitative observations for each item (Cassepp-Borges et al., 2010).

After tabulating the judges' responses, the study determined the agreement degree between them through the kappa coefficient. Regarding the assessment of the adapted instrument, the calculation of the kappa coefficient considered the proportion of possible agreements that occurred in each dimension and estimated the strength of agreement magnitude. This was interpreted from slight (1), fair (3), and substantial (1) by the group of judges, as detailed in Table 2.

Table 2 Agreement coefficient of each dimension of the scale

Dimensions	Free-marginal kappa	ic 95%	Strength of agreement Interpretation (Landis & Koch, 1977)
<i>Attitude</i>	0.36	0.05–0.66	Fair
<i>Subjective norm</i>	0.21	0.11–0.32	Fair
<i>Perceived behavioral control</i>	0.14	0.06–0.22	Slight
<i>Environmental concern</i>	0.79	0.64–0.95	Substantial
<i>Purchase intention</i>	0.28	0.13–0.42	Fair

Afterwards, the strength of agreement between pairs of experts was calculated. This revealed a substantial level of agreement in the *environmental concern* subscale, followed by *purchase intention* and

attitude, with consistencies that ranged from slight to substantial. In contrast, the subscales that presented the greatest disagreement were *perceived behavioral control* and *subjective norm*, as detailed in Table 3.

Table 3 Agreement coefficient by dimension between pair of judges

Dimensions	Free-marginal-kappa-agreement by pair of judges					
	1-2*	1-3	1-4	2-3	2-4	3-4
<i>Attitude</i>	0.60	0.47	0.47	0.20	0.47	0.07
<i>Subjective norm</i>	0.08	0.08	0.38	0.59	0.08	0.08
<i>Perceived behavioral control</i>	-0.15	0.07	0.10	0.58	0.21	0.03
<i>Environmental concern</i>	0.75	0.75	0.75	0.83	0.83	1
<i>Purchase intention</i>	0.08	0.08	0.42	0.83	0.25	0.42

Note: * Number of each judge (judge 1, judge 2, judge 3, and judge 4).

Finally, a substantial strength of agreement was found in *clarity*, while the area related to *sufficiency* presented a moderate strength of agreement. *Relevance* presented a fair strength of agreement and *coherence* showed a slight agreement. This

is explained by the redundancy of certain items according to the judges (for example: similarities in the three attitude items, as well as the generality of item number 20 regarding environmental impact). This strength of agreement is represented in Table 4.

Table 4 Kappa coefficient in the four assessment areas of the judges

Areas	Free-marginal-kappa	ic95%	Strength of agreement Interpretation (Landis & Koch, 1977)
<i>Sufficiency</i>	0.56	0.02–1.00	Moderate
<i>Clarity</i>	0.51	0.36–0.66	Substantial
<i>Coherence</i>	0.12	-0.01–0.26	Slight
<i>Relevance</i>	0.37	0.23–0.51	Fair

Once the content was validated by this expert assessment and the qualitative recommendations were added, the writing of four items of the instrument was adjusted (1, 2, 3, and 20). Subsequently, a pilot test was conducted to assess the applicability/viability of the scale in a sample of 30 psychology students from the quantitative research methodology class and seven natural resources engineering students from the life cycle assessment class, both groups from the Universidad del Bío-Bío. This data was used to refine instructions, the application format, time, and other aspects that were later included. Appendix 1 presents the final version of the instrument used.

Descriptive statistics and internal consistency reliability

The assessment of the items' averages, ranged between 2.68 and 4.53 and with standard deviations

between 0.06 and 1.01, proofs the nonoccurrence of a “floor” (1) or “ceiling” (5) effect in any of the analyzed items. The initial item-subscale correlations were: a) *attitude* (between $r = 0.63$ and $r = 0.68$), b) *subjective norm* (between $r = 0.50$ and $r = 0.76$), c) *perceived behavioral control* (between $r = -0.22$ and $r = 0.53$), d) *environmental concern* (between $r = 0.45$ and $r = 0.63$), and e) *purchase intention* (between $r = 0.57$ and $r = 0.74$). Only item 14 of the *perceived behavioral control* subscale obtained a value lower than 0.30 ($r = -0.22$), therefore, this item was deleted, obtaining new item-scale correlations which ranged from $r = 0.44$ to $r = 0.59$. Regarding the subscale means, the dimensions of a) *environmental concern* ($M = 4.48$, $SE = 0.22$), b) *attitude* ($M = 4.47$, $SE = 0.08$), and c) *purchase intention* ($M = 4.24$, $SE = 0.25$) obtained the highest values, which meant a greater presence

of these variables in the sample. The factors that presented the lowest means were the dimensions of c) *subjective norm* ($M = 3.81$, $SE = 0.06$) followed

by d) *perceived behavioral control* ($M = 4.02$, $SE = 0.40$). Descriptive statistics and internal consistency coefficients are summarized in Table 5.

Table 5 Descriptive statistics and internal consistency of items and dimensions of the green products scale ($n = 500$)

Subscale/item	$M(SD)$	Asymmetry	kurtosis	McDonald's Omega ω	ω	AVE	Composite reliability
Attitude	4.47(0.08)	-1.07	1.50	0.81			
ATT1	4.48(0.64)	-1.86	1.60	0.703	0.833	0.719	0.8845
ATT2	4.53(0.63)	-1.54	4.05	0.754	0.851		
ATT3	4.38(0.70)	-1.01	1.14	0.739	0.859		
Subjective norm	3.81(0.06)	-4.30	-0.03	0.85			
SN1	3.81(0.90)	-0.40	-0.23	0.798	0.867	0.745	0.9210
SN2	3.87(0.87)	-0.37	-0.38	0.787	0.899		
SN3	3.82(0.98)	-0.80	0.34	0.866	0.898		
SN4	3.73(0.96)	-0.40	-0.37	0.782	0.784		
Perceived behavioral control	4.02(0.40)	-0.29	-0.03	0.79			
PBC1	4.40(0.68)	-0.97	1.04	0.723	0.827	0.456	0.8216
PBC2	4.33(0.77)	-1.17	1.61	0.744	0.838		
PBC3	4.40(0.70)	-1.38	3.18	0.724	0.818		
PBC4	3.74(0.98)	-0.66	-0.06	0.773	0.589		
PBC5	3.50(1.01)	-0.32	-0.76	0.791	0.353		
PBC6	3.76(0.92)	-0.63	0.03	0.779	0.454		
Environmental concern	4.48(0.22)	-1.02	0.98	0.76			
EC1	4.23(0.77)	-1.09	1.82	0.730	0.152	0.376	0.6828
EC2	4.25(0.78)	-1.40	3.05	0.754	-0.794		
EC3	4.57(0.68)	-1.80	3.81	0.717	-0.767		
EC4	4.66(0.59)	-1.90	4.28	0.674	-0.529		
EC5	4.67(0.58)	-1.69	2.25	0.729	-0.635		
Purchase intention	4.24(0.25)	-0.63	0.09	0.86			
PI1	4.44(0.70)	-1.53	4.03	0.839	0.602	0.564	0.9151
PI2	4.31(0.73)	-1.06	1.86	0.817	0.750		
PI3	3.81(0.90)	-0.50	-0.09	0.849	0.842		
PI4	4.30(0.71)	-1.02	1.79	0.819	0.710		
PI5	4.33(0.79)	-1.32	2.40	0.804	0.825		

Note: ATT = attitude; SN = subjective norm; PBC = perceived behavioral control; EC = environmental concern; PI = purchase intention; λ = factor loadings; AVE = average variance extracted.

Convergent and discriminant validity

Two approaches were used for the convergent validity analysis. The first one was based on Table 5, even though all the items presented statistically significant factor loadings regarding their dimensions.

According to the criterion of Bagozzi et al. (1991) only 22 items obtained factor loadings over 0.5, except for PBC5 and EC1. The second approach was the average extracted variance (AVE), with values over 0.5 for the dimensions of *attitude*, *subjective*

norm, and purchase intention, and lower values for perceived behavioral control and environmental concern. These values were complemented by composite reliability, obtaining values over 0.7 for

all dimensions, except for *environmental concern* (Hair et al., 2010). Finally, in the case of discriminant validity, all the dimensions were higher than the square of the correlations (Table 6).

Table 6 Discriminant validity

Dimensions	ATT	SN	PBC	EC	PI
Attitude (ATT)	0.848				
Subjective norm (SN)	0.190	0.863			
Perceived behavioral control (PBC)	0.282	0.195	0.676		
Environmental concern (EC)	0.244	0.056	0.156	0.613	
Purchase intention (PI)	0.292	0.132	0.384	0.382	0.751

Note: The diagonal values correspond to the square root of AVE for each dimension.

Model comparison: TRA, TPB, and ETPB

The construct validity of the three models was assessed through confirmatory factor analysis, hereinafter called CFA (Lloret-Segura et al., 2010). Following the rival models strategy (Hair et al., 2010), an assessment was conducted on the global fit criteria: a) absolute RMSEA, b) incremental CFI and TLI, and c) parsimony (χ^2/df) for the three models (Table 7).

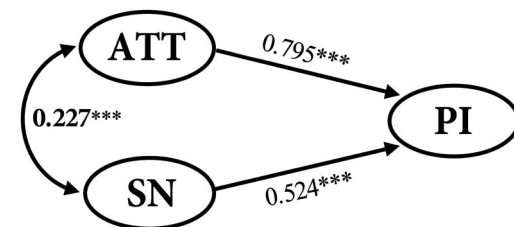
Table 7 Description of the models and their adequacy criteria

Indexes FIT & R ²	Recommended values	TRA	TPB	etpb
χ^2		139.254	329.494	495.825
gl		46	122	209
χ^2/gl	2-5	3.027	2.700	2.372
CFI	≥0.9	0.977	0.960	0.965
TLI	≥0.9	0.967	0.950	0.958
RMSEA	≤0.08	0.064	0.058	0.052
R ²				
ATT		0.633	0.529	0.551
SN		0.275	0.102	0.319
PBC		—	0.471	0.747
EC		—	—	0.820

First, the TRA model presented the following values of unsatisfactory fits ($\chi^2 = 249.705$; $df = 51$; $p < 0.001$; $\chi^2/df = 4.896$; CFI = 0.952; TLI = 0.937; RMSEA = 0.088). In order to improve the model's

fit, it was re-specified based on the residual modification indices of the items related to the same construct (Lei & Wu, 2007) in the following pairs of correlations belonging to the same dimension: a) i6 and i4, b) i6 and i5, c) i22 and i20, d) i23 and i21, and e) i24 and i23. Once the model was re-specified (Figure 4), an adequate fit was obtained ($\chi^2 = 139.254$; $df = 46$; $p < 0.001$; $\chi^2/df = 3.027$; CFI = 0.977; TLI = 0.967; RMSEA = 0.064).

Figure 4. TRA model.

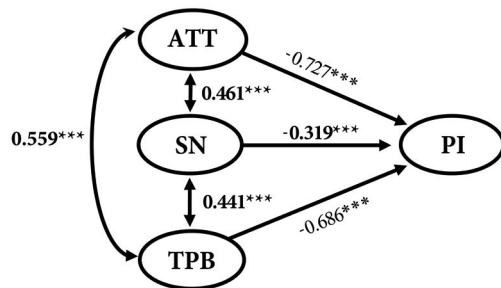


Note: $\chi^2/gl = 3.027$; RMSEA = 0.064; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.005$

Second, the TPB model presented the following values of unsatisfactory fits ($\chi^2 = 613.383$; $df = 129$; $p < 0.001$; $\chi^2/df = 4.754$; CFI = 0.907; TLI = 0.890; RMSEA = 0.087). The model was re-specified, adding the following correlations: a) i13 and i12, b) i24 and i23, c) i6 and i4, d) i6 and i5, e) i11 and i9, f) i11 and i12, and g) i11 and i13. Once the model

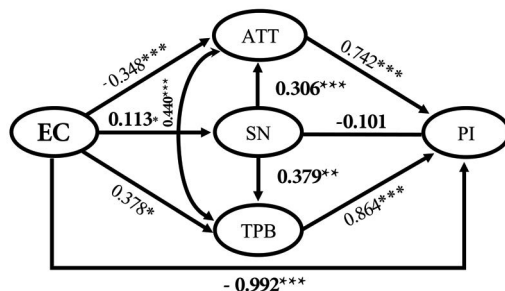
was re-specified (Figure 5), an adequate fit was obtained ($\chi^2 = 329.494$; $df = 122$; $p < 0.001$; $\chi^2/df = 2.700$; CFI = 0.960; TLI = 0.950; RMSEA = 0.058).

Figure 5. TPB model.



Note: $\chi^2/df = 2.700$; RMSEA = 0.058; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.005$

Figure 6. ETPB Model.



Note: $\chi^2/df = 2.372$; RMSEA = 0.052; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.005$

Finally, the results of the extended TPB presented the following values of unsatisfactory fits: $\chi^2 = 886.897$; $df = 221$; $p < 0.001$; $\chi^2/df = 4.013$; CFI = 0.919; TLI = 0.907; RMSEA = 0.078. The model was re-specified by adding the theoretical relationship between ATT and PBC and the empirical correlations between residues: a) i13 and i12, b) i19 and i18, c) i22 and i21, d) i20 and i19, e) i6 and i4, f) i6 and i5, g) i20 and i18, h) i11 and i9, i) i10 and i8, j) i13 and i11, and k) i12 and i11. Once the model was re-specified (Figure 6), an adequate extended fit was obtained ($\chi^2 = 495.825$; $df = 209$; $p < 0.001$; $\chi^2/df = 2.372$; CFI = 0.965; TLI = 0.958; RMSEA = 0.052).

Discussion

Our findings indicate that the extended TPB presents a better structural fit than TPB and TRA for the prediction of green products purchase intention in the studied sample of Chilean population, despite psychometric differences inside the environmental concern subscale. Likewise, this study confirmed the evidence of validity and reliability for the green products scale in the studied population.

In line with the study by Paul et al. (2016), the ETPB model is useful to explain the consumption behavior intention for green products based on a triple bottom line. Its main contribution is the indirect effect of EC, validating the initial hypothesis that positive PBC and ATT results in a higher probability of green products PI. Even though we observed that PBC and ATT are the main predictive variables, SN does not present a relevant influence over the intention of green product purchase, similar to previous studies in Filipino (Tarkiainen & Sundqvist, 2005), Indian (Paul et al., 2016), and Indonesian (Asih et al., 2020) population. In other words, the purchase intention of green products in the studied Chilean population is mainly explained by personal values and beliefs over the environment, and not by the social pressure or the potential approval of significant persons. Nevertheless, it is important to mention that in previous studies using the TPB model, *subjective norm* has been observed to be the variable with the lowest weight, both at a general level (Ajzen, 1991), and in applications to green marketing (Paul et al., 2016; Tarkiainen & Sundqvist, 2005).

Our results also suggest that the instrument presents an adequate reliability in the five assessed dimensions. Only *environmental concern* showed a fair range of internal consistency, while the other sub-dimensions are in the range of substantial and almost perfect. In conceptual terms, future studies should strengthen the operationalization of the *environmental concern* variable, incorporating indicators linked to moral obligation (values and ethic) and emotions, as these represent influential elements over the attitudes and personal intentions of green product purchase and consumption

(Ghose & Chandra, 2020). Regarding methodology, it is necessary to offer new evidence of reliability for the application of test-retest. This a relevant step to refine and broaden the results.

In terms of validity, the results showed evidence based on the convergent, discriminant, and confirmatory factor structure content. Regarding the first one, the information provided by the inter-rater agreement assessment suggests that the agreement ranges fluctuate between fair and substantial, except for the *perceived behavioral control* sub-scale. Even though subsequent intra-item and inter-scale modifications were made—they presented psychometric validity and reliability—future studies should incorporate more sensitive operationalization elements for measuring the variable related to the locus of control.

In relation to convergent and discriminant validity, the study found that the *perceived behavioral control* and *environmental concern* sub-scales were the only ones with marginal values lower than expected according to the average variance extracted. This was complemented by the composite reliability analysis, which showed lower than expected values only for the *environmental concern* sub-scale. In this regard, it has been shown that the level of *environmental concern* depends on the consumers' home country; being developed countries the ones with greater levels of concern (Singh & Gupta, 2013). However, this is inconsistent with the high levels of *environmental concern* shown by the Chilean population (EDF, 2019). A possible explanation for this inconsistency is the type of sample used by Paul et al.'s research (2016), where a high level of education was used as a control measure for a better understanding of the situation (Hedlund, 2011).

Finally, it is necessary to explain the limitations of this study. The first one is related to the characteristics of the sample, which differ from the original study in terms of educational level and income. This can be solved with a stratified probability sampling in future research. At the same time, even if there is no concluding evidence with respect to the role of the sociodemographic

characteristics over environmental concern, it is important to study different cultural, religious, and economical contexts (Ghose & Chandra, 2020). Furthermore, the replication of this study in other Latin American countries where population and environmental concern are growing is also desirable (Sandoval Díaz et al., 2020), as it would allow for a deeper understanding of the sociocultural and environmental determinants of green product purchase intention (Hazaea et al., 2022).

Second, even though the theory of planned behavior is the most utilized model in literature to analyze the personal and behavioral factors of green product purchasing, future studies should incorporate aspects related to the type of product (and their publicity attributes) and social, environmental, and emotional factors that influence the consumers (Hazaea et al., 2022).

The third limitation of this study, also shared by Paul et al.'s investigation (2016), is the fact that green products are considered as a whole. Future research should specify the type of product and include attributes such as recyclability, organic production methods, low embodied carbon, etc. Finally, it is expected that the incorporation of knowledge about the psychosocial variables involved in the green products purchase process can facilitate the communication of relevant environmental information to consumers. Even though tools such as LCA can provide detailed and objective information about the environmental profile of products, the way in which that highly technical data is communicated to the population is relevant to effectively direct their behavior towards more sustainable practices (Polizzi et al., 2016). Our results suggests that the communication of this information should be oriented towards influencing purchase intention through the environmental concern/attitude pathway and highlights the importance of considering the population's perceived limitations about their potential for buying green product, including sociocultural, economic, educational, and other relevant factors affecting behavior (Klößner, 2015). Given the lack of studies of concurrent and prospective validity,

it is important to advance in a culture of integral evaluation to generate models that could adequately predict purchase intention, with results that could be incorporated in decision-making processes such as the design and implementation of policies that requires a societal-wide adoption in order to reduce the environmental impact of consumption. Examples of these policies include limitations on single-use products (such as carrier bags), subsidies to promote energy-efficient appliances, strategies to promote car-sharing, and mechanisms to foster the adoption of sustainable means of transportation, among others (Klößner, 2015). Given the increasing relevance of these policies in Chile, such as the Ley 21.368 (2021) that limits the handing over of single-use plastics in commerce, understanding the psychological aspects related to their adoption by the population is of paramount relevance for a successful implementation.

Overall, the results of this study show that the ETPB theoretical constructs are relevant for the studied population. This implies that in order to effectively communicate environmental information collected from LCA and other environmental analysis tools, communication strategies should include messages oriented to influence cognitive-affective, contextual, and sociocultural factors related to the purchase decision process.

Project Funding

Research project DIUBB 186009 3/I “Consumo sustentable de bolsas de transporte de productos en el comercio: evaluación ambiental del ciclo de vida asociado a los patrones del comportamiento de la población”, Universidad del Bío Bío.

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Appendix 1

The applied scale with its adapted and validated content.

		Strongly disagree	Disagree	Not agree or disagree	Agree	Strongly agree
1	I like the idea of buying green products.					
2	Purchasing green products is a good practice.					
3	I have positive feelings towards the purchase of green products.					
4	People who are important to me think that I should purchase green products.					
5	People whose opinion I value prefer that I purchase green products.					
6	My friend's positive opinions can influence me to purchase green products.					
7	People who are important to me want me to purchase green products.					
8	I believe am capable of purchasing green products.					
9	If it were up to me, I am confident that I would purchase green products.					
10	I believe I will be capable of purchasing green products in the future.					
11	I have the resources, time and willingness to purchase green products.					
12	Green products are generally available in the shops where I do my shopping.					
13	I will probably have many opportunities to purchase green products.					
14	I feel that purchasing green products is not within my control.					
15	I am very concerned about the environmental problems.					
16	I would be willing to reduce my consumption in order to protect the environment.					
17	Major political changes are necessary to protect the environment.					
18	Major social changes are necessary to protect the environment.					
19	The laws to protect the environment should be enforced more strongly.					
20	I will consider buying less-polluting products in the future.					
21	I will consider switching to green products for ecological reasons.					
22	I plan to spend more money on green products than conventional products.					
23	I expect to purchase green products in the future due to their lower environmental impact.					
24	I definitely want to purchase products with a lower environmental impact in the future.					

Appendix 2

Escala de productos verdes

En el siguiente listado de afirmaciones seleccione **la opción que mejor te represente**. Tenga claro, que NO existen respuestas correctas ni incorrectas, tan sólo se quiere conocer su opinión. Por favor, marque con una X la opción que mejor lo represente.

		Muy en desacuerdo	En desacuerdo	Ni en desacuerdo Ni de acuerdo	De acuerdo	Muy de acuerdo
1	Me gusta la idea de comprar productos verdes.					
2	Comprar productos verdes es una buena práctica.					
3	Tengo sentimientos favorables hacia comprar productos verdes.					
4	Las personas que son importantes para mí piensan que debiera comprar productos verdes.					
5	Las personas cuya opinión valoro prefieren que compre productos verdes.					
6	Las opiniones positivas de mis amigos pueden influenciarme a comprar productos verdes.					
7	Las personas que son importantes para mí quieren que compre productos verdes.					
8	Creo que soy capaz de comprar productos verdes.					
9	Si dependiera de mí, confío en que compraría productos verdes.					
10	Creo que soy capaz de comprar productos verdes en el futuro.					
11	Poseo los recursos, tiempo y voluntad para comprar productos verdes.					
12	Habitualmente hay productos verdes disponibles en los lugares donde compro.					
13	Probablemente tendré muchas oportunidades para comprar productos verdes.					
14	Siento que comprar productos verdes no está dentro de mi control.					
15	Estoy muy preocupado por las problemáticas medioambientales.					
16	Estaría de acuerdo con disminuir mi consumo con tal de proteger el medio ambiente.					
17	Cambios políticos importantes son necesarios para proteger el medioambiente.					
18	Cambios sociales importantes son necesarios para proteger el medioambiente.					
19	Las leyes que buscan proteger el medioambiente deben ser aplicadas con mayor fuerza.					
20	Consideraré comprar productos menos contaminantes en el futuro.					
21	Consideraré cambiarme a productos verdes por razones ecológicas.					
22	Planeo gastar más dinero en productos verdes en vez de productos convencionales.					
23	Espero comprar productos verdes en el futuro debido a su menor impacto ambiental.					
24	Definitivamente deseo comprar productos con menor impacto ambiental en el futuro.					

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Revista Colombiana de Psicología, vol. 32, n.º 1

Texto compuesto en caracteres Minion, Syntax y Serifa. En las páginas interiores se utilizó papel Book cream de 60 gramos y, en la carátula, papel Propalcote de 240 gramos. Impresa en Bogotá, Colombia, por Imagen Editorial S.A.S., en octubre de 2022