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Contenido

Editorial

The Sigmoid Function as a Model of Demand

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TRADITIONALLY, THE relationship between price and demanded quantities has been modeled using classic elasticity measures (Nicholson & Snyder, 2012). This strategy is consistent with classical microeconomic theory, which derives demand from utility functions assumed to underlie human decision making (e.g., Cobb-Douglas, CES). To build these measures, economists transform price and quantity into a log scale and run a classical linear least-squares regression. That is, the demand equation is linearized using natural logarithms and then this function is estimated in an OLS regression. For instance, in Equation 1, the Cobb-Douglas demand equation presented initially is linearized in step 1, yielding three terms: one associated to $\ln(\alpha)$, that is, the goods' utility; another associated to $\ln(I)$, that is, to individual income; and another term associated to $\ln(p)$, which is the good's price.

$$q = \frac{\alpha I}{p} \;\rightarrow\; \ln(q) = \ln(\alpha) + \ln(I) - \ln(p) \;\rightarrow\; \ln(q) = C + \beta_1 \ln(I) + \beta_2 \ln(p) + e \;(1)$$

Consistently, after step 2, the regression equation yields C, which is a constant associated to the goods' utility, β_1, which is the estimated effect on quantity produced by changes in income, and β_2, which estimates the effects of price on the quantity purchased. In this framework, demand is the product of a maximization process in which individuals choose the quantities between two products that produce the higher possible utility, given a budget constraint and a set of prices. If utility functions hypothesized by microeconomists (e.g., Cobb-Douglas, CES) adequately describe people's behavior, then, a regression on price and quantities in log scale will provide an adequate estimate of utility function parameters, and, therefore, of elasticity (Nicholson & Snyder, 2012).

However, microeconomic assumptions regarding utility are not based on empirical observation. They are generally chosen to provide well-behaved mathematical functions and allow easily workable equilibrium proofs. For this reason, the demand functions derived from microeconomic theory predict behavior that is far from the one observed in psychological studies (Ariely et al., 2003). For instance, demand derived from the Cobb-Douglas function increases to infinity when price gets closer to zero (Nicholson & Snyder, 2012). There is evidence that this is not the case for human behavior (Shampanier et al., 2007). Similarly, demand derived from traditional microeconomic models is either concave, convex, or linear (which is both concave and convex), but it cannot be concave for some subset of the domain of the function, and convex for another part of the domain. Observations of individual demand contradict at least these two properties.

First, human (and animal) subjects have consumption limits and seem to adapt their decisions to those limits (Roma et al., 2016). That is, individuals do not demand

goods beyond the point of maximum consumption, which prevents demanded quantities to grow to infinity or, at least, to very high amounts at zero price. Second, people are reactive to reference prices that act as thresholds after which demand is reduced (Weisstein et al., 2016). In other words, demand is relatively constant once the maximum possible consumption level is reached, until price crosses a threshold after which individuals stop buying the product. How steep this decrease in consumption is depends on the utility value of the product (Roma et al., 2016). These two facts provide a different shape to the demand curve that the one provided by standard microeconomic theory. Instead of being c-shaped or linear, demand is constant below the reference price and decreasing once this price is reached, producing an inverted s-shaped form (Figure 1).

Figure 1
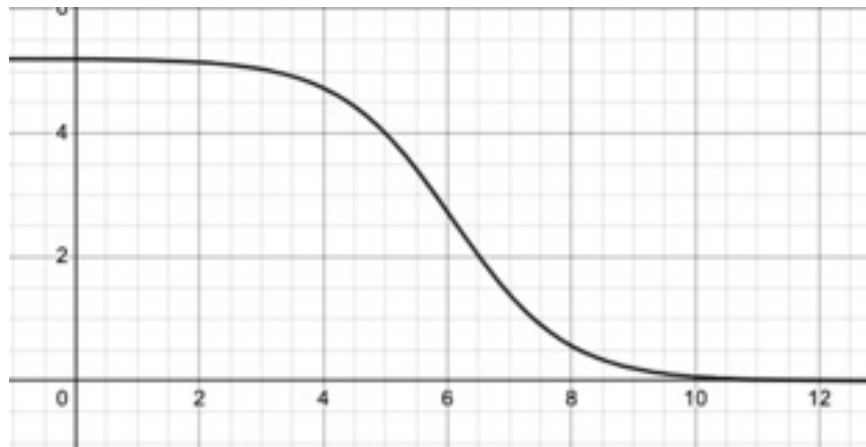
Demand behavior showing a decrease in demand after a critical threshold of 2 has been reached

As an alternative to the classic microeconomic demand function, Hursh and Silberberg (2008) have proposed the exponential demand model (Equation 2). This model incorporates the idea that consumption does not increase beyond the point of maximum consumption. Additionally, given that it is based on behaviorism, this model describes the decrease of consumption from the point of maximum consumption as a function of the good's reinforcement value. Empirical observations of human and animal subjects confirm these two properties of the exponential demand function. In the case of humans, studies include both studies of demand in real settings and hypothetical purchase tasks.

$$\log(q) = \log(q_0) + k(e^{-\alpha p} - 1)\,(2)$$

This model has two problems: First, it does not include threshold effects associated to reference prices. Basically, consumption starts to decrease when price increases from zero, not afterwards. Second, the core parameters of the exponential demand function are in the exponent of the function, even after applying the

log transformation, which makes it impossible to linearize this function. That is, the function cannot be linearized using a log transformation, as it is the standard procedure in economics. Without this option, the relationship between price and quantity demanded cannot be estimated using a regular OLS regression. On the contrary, when estimating this function's parameters from empirical data, authors draw upon iterative methods, such as the *wrapnls* command in R. This strategy, however, is far from the standards of econometric estimation and relies on the brute force of modern computers rather than on a straightforward statistical procedure.

In our research group, we have developed an alternative to the exponential demand function, the sigmoid function (Equation 3), which has two advantages over the model proposed by Hursh and Silberberg (2008). First, it incorporates threshold effects and reference prices. Second, it is linearizable and, therefore, it can be estimated through least-squares procedures. Equation 3 presents a representation of demand based on the sigmoid function in which mc is the maximum possible consumption, α represents the threshold associated to the reference price, and β represents the rate of consumption decrease, associated to the goods' utility. The sigmoid function can be easily linearized, so the parameters can be estimated through regular OLS regression procedures, in a way that is understandable for and workable by economists. Due to space constraints, we do not include full proof of the linearization procedure. However, the idea is to conduct an algebraic transformation to eliminate the sum in the denominator and then, to conduct the log transformation.

$$q = \frac{mc}{1+e^{-(\alpha+\beta p)}} \quad (3)$$

In sum, the sigmoid function has three key advantages over prior models. First, it incorporates behavior that responds to maximum consumption limits. Second, it captures participants' response to thresholds or anchors, such as reference prices. And third, it models the differences in the rate of consumption decrease after the threshold price has been reached. The sigmoid function models behavior in which individuals consume at maximum possible levels until they reach a reference price and then decrease their consumption at different rates depending on the characteristics of the good being purchased. Additionally, it can be linearized through log transformations, which allows least-squares estimation. For these reasons, this function is an alternative to both the traditional microeconomic demand function and the exponential demand model. The sigmoid function keeps the ability of the exponential demand model to capture maximum consumption and different rates of consumption decrease but adds the possibility of modeling reference prices and other threshold and anchoring effects. The incorporation of threshold effects in maximum consumption behavior makes this function more flexible than the exponential demand model. More generally, it serves to formalize psychological findings in a way that allows the gradual replacement of econometric assumptions for observed functions in microeconomic theory. Future tasks include establishing the mathematical properties of this function, as well as its origin within either a maximizing,

a satisfying or a signal detection framework. It is also necessary to evaluate whether (and if so, how) equilibrium arises in supply and demand situations when demand behaves according to the sigmoid function.

The Colombian Journal of Psychology wants to invite the psychological research community to propose viable mathematical alternatives to formalize demand behavior. We believe that diverse methodological strategies need to be implemented to test the empirical feasibility of these alternatives. In this task, both the exponential demand function and recent advances in the formalization of demand, such as the sigmoid function, need to be considered. Psychology has an important role in building a psychological, empirically tested, alternative to classic microeconomic demand models. It is urgent to transform old-fashioned ideas about the relationship between price and purchase decisions and, more broadly, reaffirm the role of psychology in the description of economic behavior.

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Artículos

Vocational Choice: A Narrative Identity Approach Conceived from Cultural Psychology

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Abstract

Vocation has been studied from perspectives such as trait-factor, differential psychology, and psychometrics. These perspectives have assumed it to be the precursor of a unique and definitive career choice, resulting from matching personal characteristics with the requirements of a job. Vocation has also been conceptualized as the product of evolutionary stages, dependent on maturational processes. However, the changing conditions of the contemporary world of work make it necessary to reconsider vocationality from a dynamic perspective that transcends the exclusively psychometric view. This article proposes an alternative approach to vocation, based on the processes of identity construction proposed by cultural psychology. Thus, vocation is assumed as a process of a narrative nature, in constant formation, based on the symbolic resources with which people interact. Vocationality emerges as a historical, situated, and distributed phenomenon, marked by occupational and educational experiences, as well as by interactive experiences with significant others.

Keywords: cultural psychology, narrative identity, possible vocational world, vocation, vocational identity, vocational psychology.

La Elección Vocacional: Una Aproximación Desde la Identidad Narrativa Concebida a Partir de la Psicología Cultural

Resumen

La vocación ha sido estudiada desde perspectivas como las de rasgo-factor, la psicología diferencial y la psicometría. Estas perspectivas la han asumido como el precursor de una elección de carrera única y definitiva, resultante de alinear características personales con los requerimientos propios de un puesto de trabajo; o como el producto de etapas evolutivas, dependientes de procesos madurativos. No obstante, las condiciones cambiantes del mundo laboral contemporáneo obligan a reconsiderar la vocacionalidad desde una perspectiva dinámica que transcienda la mirada exclusivamente psicométrica. El presente artículo propone una aproximación alternativa de la vocación, sustentada en los procesos de construcción identitaria planteados desde la psicología cultural. Así, la vocación se asume como un proceso de naturaleza narrativa, en constante formación, fundado en los recursos simbólicos con los que interactúan las personas. La vocacionalidad emerge como un fenómeno histórico, situado y distribuido, marcado tanto por experiencias ocupacionales y educativas, como por vivencias interactivas con otros significativos.

Palabras clave: identidad narrativa, identidad vocacional, psicología cultural, mundo vocacional posible, psicología vocacional, vocación.

THIS ARTICLE offers an approach to the vocational phenomenon from cultural psychology. From this perspective, the vocational phenomenon is understood as an identity process of a narrative nature in continuous progression supported for its operation on the symbolic resources available in the socio-cultural contexts within which people interact. Based on these resources, individuals build stories about themselves in the occupational realm.

The thesis that gave rise to this reflection, as well as to the empirical research that accompanied it1, starts from an important premise, namely. That the conventional approaches adopted to understand and intervene vocationality within the framework of career choice have turned out to be insufficient to achieve its mission. Two reasons support this statement. On the one hand, the dynamic nature of vocation is unknown. Vocationality must be understood as a permanent process of construction of meaning. A process, present in those who are preparing to make decisions of an occupational nature, as part of their transition to working life. On the other hand, the changing conditions of a world of work marked by many uncertainties are not considered. For example, the new ways of organizing work, the short-term nature of labor relations, and the blurring of the boundaries recognized between different professions. Concerning this, the legitimate performance roles that can be assumed in each of the professions, among many others.

For the development of this analysis we did a brief review of the main approaches taken in vocational psychology throughout its existence as a field of reflection and intervention. Subsequently, we introduced theoretical elements to clarify the notion of self and identity, delving into the latter concept from a socio-cultural perspective. Next, we retaken the dominant perspectives in the study of vocational identity to finally integrate conceptual elements of cultural psychology that

serve to rethink this construct. Finally, we redefined vocational identity as a set of meanings in which people link self-referential information with occupational experiences.

Vocational Psychology as a Starting Point

Today, vocational psychology is recognized as an applied specialty, focused on deepening the understanding of vocational behavior to improve career interventions (any treatment or effort aimed at enhancing an individual's professional development or enabling them to make better career-related decisions) and inform public employment policies (Jackson & Verdino, 2012). From this conceptual horizon, it has been assumed that vocational behavior emerges when individuals pursue goals of an occupational nature. These objectives include the development of values, interests, and aspirations that will shape a person's working life (Vondracek et al., 2014). In other words, vocational psychologists would seek to understand the way in which some characteristics of individuals contribute to make favorable occupational options visible. Its function is to assist individuals in the process of choosing and preparing for a job that suits their personal goals and competencies.

However, it should be noted that vocational psychology in its development has also been nourished by different theoretical perspectives on human behavior. These perspectives have heterogeneously informed the way in how both the phenomena under study and the methods used to approach them are conceived, as detailed below.

Conceptual Approaches in Vocational Psychology

Throughout its history, vocational psychology has always faced the challenge of solving different questions posed by the existing society. For this, it has developed different theoretical models and intervention methods in which it sought to link the personal objectives of individuals with the dominant economic activities in each era

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1   This article corresponds to the conceptual model constructed by the main author as part of his doctoral thesis.

(Savickas, 2011). It is along this path that the first vocation theory arises at the beginning of the 20th century. It sought to respond to the needs and demands linked to the growing processes of industrialization, urbanization, and massive migration that characterized this era (Xu et al., 2018). All these phenomena led to organizational concerns about how workers could be efficiently placed in the right occupation. In the scenario described, it is that Frank Parsons published his work entitled "Choosing a Vocation" in 1909. In this book, he will present a frame of reference that formulates occupational guidance as a process aimed at facilitating the successful choice of a vocation as the logical result of combining three factors: a) a clear understanding and knowledge of the subject's self (aptitudes, abilities, interests, ambitions, resources, limitations); b) a broad knowledge of the occupational world, and finally; c) a set of appropriate reasoning that articulates the two previous elements. It is within this conceptual horizon that the so-called theoretical model of person-environment fit emerges, that, as Holland (1959) proposed half a century later, seeks to link the individual to some work role according to his or her personal characteristics. In practical terms, the purpose of this conceptual perspective is to promote a career choice that, after following the prescribed methodological requirements, would be definitive. This conception of vocational psychology will be consolidated as the dominant one during most of the 20th century and so far this century (Watts & Sultana, 2004).

Nevertheless, and continuing with the historical journey, it is important to point out that as the 20th century progressed and as the world underwent geopolitical, social, cultural, and economic transformations, the need for a new type of labor force emerged. Therefore, the profile of workers employed in highly hierarchical organizations began to stand out (Savickas, 2011). This led to a new social question as to how people could develop careers within these organizations.

In this context, the so-called vocational development approach emerges (Super, 1953). This approach will propose career choice as the result of the progress of individuals through a series of predictable evolutionary stages (progress guided by maturational processes). In turn, each of the stages would be made up of tasks that should be fulfilled to ensure congruent alignment with an occupational role.

It is clear that both approaches are grounded in differential psychology and trait-and-factor theories (McIlveen & Patton, 2006), a conceptual scheme that is supported by psychometric methods. Both perspectives will start from common premises that understand vocational development as a cognitive process in which individuals use reasoning to make career decisions. They also assume that occupational choice represents a single event where there is only one alternative that would be the right one for those who are faced with a vocational decision (McIlveen & Patton, 2006). The starting point of the above conception is that psychological characteristics during development adhere to normative criteria and that once adulthood is reached, these traits will remain relatively the same in different contexts and over time (Young & Collin, 2004). In fact, these premises have been present in the local context since the middle of the last century (Bernal de Sierra, 1999; Giraldo Angel, 1960; González Y. et al., 1969). The need to identify dispositional traits and occupational requirements to ensure an objective, efficient and logical fit between individuals and their educational and occupational choices has also been dominant on the national scene (Gomez Hincapie, 1963). Approaches based on psychometric instruments that allow transcending subjectivity in the identification of individual differences (Carrillo V. et al., 1966). These approaches even offer the possibility of relating personality attributes to academic performance and job satisfaction (Salessi & Omar, 2017).

However, although theories of vocational choice and development have been and will continue to be relevant to psychology, their assumptions

seem to miss the complexity of contemporary vocational behavior (Blustein et al., 2019; Bujold, 2004; McMahon & Watson, 2020). Complexity because of the social reordering of work that has been taking place, particularly and more rapidly in the last three decades (Canzittu, 2022).

Thus, and following Savickas (2012), the world of work that distinguishes the 21st century contrasts drastically with the one that existed during the immediately preceding century. In the 20th century work was characterized by secure employment conditions in stable organizations. The organizations offered a firm foundation to build a life project, allowing employees to visualize a long-term future. Instead, today's employment landscape is largely shaped by the digital revolution and the globalization of the economy and culture. This has led to a restructuring of work bringing with it a new psychological contract between organizations and workers (Rousseau, 1995). This new contract is characterized by temporary assignments and fixed-term contractual projects that lead to new forms of employability (Canzittu, 2022; McMahon & Watson, 2020; Wen et al., 2022). In organizations, workers have become mere peripheral or contingent components, destined for a recurrent sale of their skills to employers who require them with an expiration date.

Consequently, the contemporary reality of the workplace compels workers to be perpetual apprentices, to commit themselves to organizations to which they render their services for predetermined periods. In addition, workers must exhibit a type of professionalism that allows them to adapt quickly to the volatile needs of their employers (Canzittu, 2022; Savickas, 2012; Wen et al., 2022). In other words, the responsibility for building a career has been transferred from organizations to individuals, a situation that demands greater effort, knowledge, and self-confidence from them.

Against this backdrop, the assumptions underlying the person-environment fit and vocational development perspectives have become obsolete, given the socio-labor conditions now in force

have sharpened the complexity of the vocational phenomenon (Blustein et al., 2019; McMahon & Watson, 2020). This complexity demands visions that must be permanently contextualized in the horizon of a search that transcends diagnostic processes based exclusively on the measurement of behavioral traits. Complementarily, this renewed vision needs to explore the phenomenological life of individuals. In this sense, it is essential to learn more about the subjective and changing construction of motivations, interests, and skills of individuals. The goal now is to empower people from the realities they experience, linked to their individual world and the development environments that serve as their context (McIlveen & Patton, 2006; Sultana, 2020).

This contextualist approach will be based on a narrative perspective congruent with cultural psychology (Bruner, 2005, 2008; Hartung, 2013; McMahon, 2018). Thus stated, the aim is to answer the question that contemporary society addresses to vocational psychology. The contemporary question is how workers will be able to cope with the reorganization of work and employment in multicultural information societies (Canzittu, 2022; McMahon & Watson, 2020; Savickas, 2011). The question will demand a profound reordering of both theory and practice underlying vocational intervention. A conceptual renovation that will find its support in premises taken from both narrative and social constructivism. The abovementioned will lead to the conception of a self that is built and unfolds as a personal history that must be reconstructed repeatedly according to changing occupational and educational circumstances, of course, without the individual losing his or her sense of completeness, continuity, and identity because of the continuous process of reconstruction.

Derived from the above, the need arises to reformulate the constructs that have traditionally shaped the dominant approaches in vocational psychology. To this end, it is necessary to give greater relevance to theoretical categories that have been relatively marginal when analyzing vocational

processes, as identity (McMahon & Patton, 2018), and to displace others as personality. This implies giving more weight to adaptation than to the maturation of internal structures; to intentionality rather than any decision; and to stories rather than psychometric test scores (Savickas, 2012). From this refocus, contextual possibilities, dynamic processes, non-linear progression, multiple perspectives, and personal patterns of career development will be highlighted. Thus, the term career is no longer understood as a sequence of occupations and jobs exercised during person lifetime. Instead, career is assumed to be a subjective construction through which individuals give meaning to their vocational behavior following their life circumstances (Gülşen et al., 2021; Savickas & Pouyaud, 2016; Wen et al., 2022).

In the new occupational scenario that characterizes the contemporary world, the concept of identity acquires preponderance. The notion of identity will facilitate the study of the process of construction of the self as a function of the social contexts surrounding individuals. Even more so, if its theoretical and comprehensive approach is carried out from the perspectives and premises of both narrative and social constructivism, in a development as the one proposed below.

Social Constructivism in Vocational Psychology

Social constructivism is a perspective that emphasizes the link between psychological phenomena and the social environment, giving primacy to the social sphere over the individual. This is because it contemplates that human functioning is the result of social interaction and relationships that precede the individual (Gergen, 2007; Kang et al., 2017; McMahon & Watson, 2020). Social constructivism is related to the cognitive processes through which people elaborate and experience their social and psychological worlds, through mental products generated from symbolic resources that are the mediators to know reality (Young & Collin, 2004). The epistemological approach

underlying this theoretical position emphasizes the way in how individuals elaborate knowledge and assign meaning to their experiences within the framework of a social and personal context. Social constructivism, then, is interested in the way that external and collective reality relates to internal and individual reality, and thus orients its research interest towards those psychological processes closely linked to social processes. The contribution that this perspective makes to vocational psychology is outlined below.

First, it should be noted that constructivism makes it possible to refute the discourse of so-called personal dispositions (any of several enduring characteristics that describe or determine an individual's behavior in a variety of situations, as personality traits). This concept is based on the assumption that it is possible to match internal traits with occupational characteristics, thanks to the support of sophisticated psychometric processes (Young & Collin, 2004). Constructivism, on the contrary, will highlight the processual nature of the self, sustained by elaborated sociocultural symbolic resources necessary to shape the psychological processes that underlie it (Bujold, 2004; Kang et al., 2017; McMahon & Watson, 2020). Likewise, from the constructivist point of view, emphasis will be placed on the situated character of the actions of individuals and the indispensable contextualization of their interests and occupational concerns in the social, economic, cultural, historical, and temporal scenarios that surround them (Kang et al., 2017; Young & Collin, 2004). In brief, the self and the efforts to build a career in an occupational and educational setting are interwoven into people's developmental environments.

Then, it is assumed that the career is a subjective construction derived from the interaction between personal and social experience. Its configuration would take place over time and in specific contexts. While the career takes shape, the definition of the self, the development of a sense of agency and purpose also progresses, relying on mediators as narrative, autobiography, and life

history (Bujold, 2004; Kang et al., 2017; McMahon & Watson, 2020; Young & Collin, 2004).

Consequently, it is proposed that the construction of the self through narrative in its various forms will be based on the negotiation of meanings within specific temporal and social contexts. The same contexts where relationships and interactions with others take place. On the other hand, it is recognized that the subjective construction of a career is an active, dynamic, and dialectical process. It is not simply a finished product. In this perspective, it is recognized that individuals act collectively, by given history and culture, in which the construction of the vocational worlds that they are part of takes place (Bujold, 2004; Kang et al., 2017; Young & Collin, 2004).

In short, it can be concluded that constructivism allows approaching the vocational phenomenon in an alternative and innovative way, understanding it as a process that is inscribed in socio-historical contexts that are permanently created and recreated. This conception is consistent with Bruner's (2008) socio-cultural proposals on cognitive development, that guide the conceptualization proposed here (Gergen, 2007; Kang et al., 2017; Young & Collin, 2004). So, after recognizing the place of constructivism in this new conception of vocationality, next, this process will be approached from the notion of identity.

Identity from a Socio-Cultural Perspective

As mentioned, the complexity of the contemporary occupational world demands the adoption of approaches that give greater weight to an understanding of psychosocial dynamics that are sensitive to the contextual realities of individuals. Because of this, it is necessary to emphasize the relevance of reformulating the premises that have historically explained vocational behavior, reorienting them towards constructs as identity, intentionality, and narrative (Gülşen et al., 2021; Savickas & Pouyaud, 2016; Wen et al., 2022). It is in this epistemological scenario that the notion of

identity takes on special meaning, since, as will be explained below, it would make it possible to link the construction of people's vocation to their life scenarios (McMahon & Patton, 2018).

In this regard, some authors state that identity represents the link between the self and society (Hammack, 2008; Ozer & Schwartz, 2020). In convergence with the above, D. Holland & Lachicotte (2007) defend the socio-genetic formation of identity and assume that individuals construct personal versions of themselves based on the social realities in which they develop, thus configuring their identities. Accordingly, they assert that identity represents a way of organizing relevant and related feelings, understandings, and knowledge with a personally valued and culturally imagined social position. These identities formed on personal grounds would mediate the individual's ability to organize and carry out the intent of the activity in the settings and occupations of the socio-cultural worlds (D. Holland & Lachicotte, 2007; Lachicotte, 2012). However, the ability for an individual to organize himself or herself in the name of identity would initially develop as an interactive transaction with others. Only then could people apply this cultural resource (identity) to their own actions (D. Holland & Lachicotte, 2007; Lachicotte, 2012).

Consequently, identities are understood as psychosocial processes through which people construct the self in action, learning (through the mediation of cultural resources) to order self-referential meanings and to organize their actions according to their socio-cultural worlds (Vågan, 2011). In short, identities will be personally meaningful and actively internalized. They are formed as a function of broader socio-cultural constructions that allow for the collective production of socially constructed worlds of interpretation and action (Lachicotte, 2012). In other words, identities are constituted as means through which individuals link the self to social roles and assign subjective meaning to these roles (Burke & Reitzes, 1991).

Based on the above, it is possible to appreciate the importance of studying vocation through the

notion of identity. Doing so will make it possible to integrate under a psychosocial construct, both the subjective experience of culture and the contextual reality surrounding its configuration. Thus, it will be recognized that both the content and the functioning of the processes underlying identity are eminently socio-cultural and therefore represent a historically delimited, socially transmitted, and culturally regulated phenomenon (Esteban-Guitart et al., 2013).

For all these reasons, identity is a notion that makes it possible to understand career construction as a fluid process, socially configured, culturally derived from language, and adaptable to the interactions inherent to the contexts. Hence the importance of taking up this notion in contemporary conceptualizations of vocational psychology. In this way, this applied specialty departs from the static and essentialist conceptions of personality, that are still dominant (Stead, 2007).

It is necessary to emphasize that, from this comprehensive perspective, identity is seen as interwoven with power relations and ideologies, making it susceptible to ethnic, gender, generational, and social class socio-cultural discourses. Identity, thus assumed, will link the self with behavior, since it constitutes means through which people organize self-defining meanings in relation to the social realities they inhabit. This will make it possible to structure actions based on the self-referential information available (McMahon & Patton, 2018). In this way, the identity will give the behavior an intentional character. To the extent that identity orders the actions of individuals around a set of meanings about themselves (constructed in the daily experiences in each of the interactive scenarios where people participate), it will promote a sense of agency, of responsibility for one's own life course (Skhirtladze et al., 2019).

Thus, identity should be recognized as having directive functions in the actions and decisions of people in different spheres of life (Vignoles et al., 2011). These competencies are derived from the internalization or appropriation of interactive cultural resources implemented in social exchanges,

symbolic instruments that, when mastered by individuals, enable them to exercise control over their actions or intentional behaviors (Lachicotte, 2012). To continue advancing in the proposed conceptualization, it is convenient to specify the reiterated mention of the self to allude to identity, for this reason a brief distinction between these two notions is presented below.

Self and Identity

According to Owens & Samblanet (2013), the notion of self encompasses identity and is defined as an organized and interactive system of thoughts, feelings, identities, and motives that people attribute to themselves to characterize themselves. This system will be born with the support of language and self-reflection. For its part, identity is understood as a component that is subsumed in the broader notion of self (Owens et al., 2010) and is defined as a subset of self-referential descriptions delimited by specific life domains or roles (Sestito et al., 2015; Vondracek & Porfeli, 2011). The central quality that will distinguish the self from identity will be that the former corresponds to a process and an organization originating in self-reflection. The second can be seen as a tool that individuals or groups use to self-categorize and present themselves to the world (Owens & Samblanet, 2013).

Therefore, identities are categories that people use to specify who they are and to position themselves about others. In this context, the construction of the self will be limited by the abstractions of experience and the real daily experiences of individuals. Identity, on the other hand, will be demarcated by a more restricted set of representations and associated schemes of experience aligned with roles. In this sense, it would be a more relational and psychosocial construct (Vondracek & Porfeli, 2011).

Moreover, it is assumed that human beings are immersed in social structures and systems of shared meanings. Consequently, the self, identities, and representations of the world will be configured in interaction with the other people

who inhabit the spaces or participate in the socio-cultural activities in which individuals habitually develop. Complementarily, individuals experience the socio-cultural conditions that frame their lives through the representations they have of themselves. Through these representations, they also organize their experiences and actions within the worlds that they are part of.

Given the above, it is worth reiterating that people construct the self and the conceptions derived from it based on the symbolic resources provided by the culture in which they are immersed. In short, there is a link between the self and those socio-cultural representations with which one interacts. Thus, identity will operate as a support for vocationality since it will determine the way individuals think about themselves concerning specific social roles (Savickas, 2012). Having made the above considerations, we now move on to situate the place of cultural psychology in its conceptual approach to the construction of identity and vocationality.

Cultural Psychology and the Construction of Identity as a Basis for Understanding Vocationality

Cultural psychology represents a set of theoretical orientations that converge in highlighting the importance of socio-cultural contexts for the functioning of individuals and the way in how these two components mutually constitute each other (Esteban-Guitart et al., 2013). In this panorama, the shared goal assumed from the different aspects of Cultural Psychology will be to understand the way in how the processes of human development take place in culture (Santamaría et al., 2019).

Accordingly, Shweder (1999) points out that cultural psychology deals with the study of the intentional or symbolic states of individuals, their intentional actions or behaviors. These volitional manifestations would be part of broader socio-cultural conceptions that were acquired through people's participation in discourses, laws, and collective practices that are common in the communities where they interact. Likewise, Penuel & Wertsch (1995) emphasize that a socio-cultural approach to psychology implies assuming the irreducible tension between the individual functioning of human beings and the historical, social, and cultural components that surround them, accepting them as an inherent aspect of their daily actions.

Among the different conceptions that coexist within cultural psychology, we chose the one represented by the American psychologist Jerome (Bruner, 2005, 2008). This theorist considers that culture constitutes a mediating component of the actions of human beings in the world. Accordingly, he proposes that culture would be a sort of toolkit, techniques, and procedures that would allow people to understand and manage the world through human conventions represented in signs (Bruner, 1996).

Notwithstanding, it is also imperative to point out that, just as culture shapes human functioning and opens some possibilities, it also imposes some limits on the way in how people operate. Thus, it will be understood that the actions of individuals will be defined based on the toolkit of the culture in which they live. Therefore, the sense of reality that people attribute to the worlds they inhabit will always have a construction character and will be the product of the knowledge and experiences gestated from the use of the cultural toolkit that generation after generation inhabited.

Then, it should be noted that one of the most important tools for the construction of reality is narrative. The narrative represents a discursive resource through which individuals have the possibility of creating a version of the world and a place in it. It constructs the lives of those who narrate (Bruner, 1990). Narrative conceived by those means will give rise to a way of thinking and will become an instrument at the service of the creation of meanings, this will facilitate the organization of knowledge coming from daily experiences related to human intentions and actions (Bruner, 1990). The above, within the framework of the vicissitudes and consequences that trace the

evolution of the different actions of the person as those related to vocational choice.

Thus, narration constitutes an instrument that will shape the cognitive mode through which the present, past, and possible human condition are built. A sense of self is gestated which, according to Bruner (1997), will be nothing more than a textual construction of how individuals situate themselves about others and to the realities they inhabit. Thus, it can be affirmed that the genesis and formation of the self takes place while human beings enter a given culture. After this, people gain access to narratives or stories linked to an specific tradition composed of a series of orthodox characters, scenarios in which they act, and actions that become comprehensible to them. In other words, these culture-specific stories represent a guide to the roles and possible worlds where action, thought, and definition of the self are permissible and desirable. All this, under a set of deontic rules that will regulate the self-referential construction (Bruner, 1997).

In fact, a vehicle through which culture transmits the epistemological and deontic contents about the self is given by folk psychology. This notion alludes to a set of normative and interdependent descriptions that regulate the functioning of human beings, their cognitions, emotions, and actions prescribe what modes of life are possible and how commits can be made within those modes of life (Bruner, 1990). The appropriation (internalization) of folk psychology by the people will occur to the extent that they master the language and intensify their interpersonal transactions within the framework of community life (Esteban-Guitart, 2012; Penuel & Wertsch, 1995).

Following the above, it is assumed that identity is structured through narrativized conceptions of folk psychology. In this way, people experience themselves and others based on categories established as conventional, transmitted through collective conceptions, promulgated by institutions and devices that culture has forged for this purpose. This is the case of laws, education, and the family (Bruner, 1990).

Like cultural reality, identity is a social construction, negotiated, distributed, and situated. A narrative configuration that provides people with a sense of autonomy and volition. But, at the same time, identity places the individual concerning the collective, making explicit his commitments to others and reminding him that his autonomy is limited by the symbolic, historical, and social system to which he belongs. Narrative as a cultural resource for communicating and creating realities facilitates the construction of a fully meaningful and meaningful personal world. The construction of a self, in constant revision, capable of integrating the experiences that people face daily. Similarly, the narrative provides the identity models available in society in an autobiographical format.

Thanks to the narrative a sequential structure emerges where people's experiences acquire meaning based on a central argument that justifies the underlying intentions of a past action. This structure will also provide a margin in the outcome that allows for the integration of new experiences while facilitating the foreseeing of possible alternatives for action. In this sequential structure, three referents and temporalities are linked in a plausibly, the past world of the individuals, the present they experience, and the future they imagine, maintaining their self-referential meaning throughout the process. In this way, narrative conceptualization will stand out as the means through which individuals can produce a meaningful whole from their life events. The above, after identifying those events as part of a plot or theme under which it brings together and signifies the performances and experiences (Ricoeur, 2006). A history of themselves, that will provide them with unity and personal identity (Polkinghorne, 1991).

In synthesis, identity represents a narrative construction that will depend both on intrasubjective experience, composed of memories, emotions, ideas, beliefs, and external sources, given by social interactions and the expectations that culture delineates on those who appropriate and exercise its conventions. Individuals assume

(tacit) identity models that objectify what they should be and offer prescriptions that delimit the configuration of themselves in society (Bruner, 1997). Up to this point, the most relevant conceptual coordinates have been presented to preliminarily delimit the notion of identity in general, but that also apply to the vocational sphere. Next, other details that gave rise to the adoption of vocational identity as the axis of the research carried out will be specified. An overview of the dominant approaches to their study is also presented.

Genesis and Variants of the Vocational Identity Construct

Vocational identity as a construct is the result of the preponderance of the person-environment fit and vocational development models in psychology. This construct made it possible to respond to the need to generate concepts that associate personal characteristics with work environments. Thus, the requirement for notions representing the self in terms of differentiation and consistency of preferences associated with a personality type was satisfied (Skorikov & Vondracek, 2011). This conception is based on implicit assumptions of stability of both occupations and personality traits. Although vocational identity occupied an important place in theoretical models (Hirschi, 2011b), its function was limited to accounting for an evolutionary path by being translated into an indicator of progress within the broader process of career development (Skorikov & Vondracek, 2011). Vocational identity could account for this trajectory, thanks to its timely measurement.

So far, studies on vocational identity have been conducted from two conceptualizations that, with different theoretical logics, have developed instruments for its measurement. First, there is the theory of vocational personality types and work environments, that sought to obtain a clear and stable picture of what a person might have as his or her goals, interests, and talents (J. J. Holland et al., 1980). In this perspective, the Vocational Identity Scale was developed, a test that evaluates the general level of this construct, assuming it as a product, without considering its formation process.

The second theorization of vocational identity (Porfeli et al., 2011) was traced from the lens of states. A perspective initially formulated by (Marcia, 1966), that sought to operationalize the process of identity construction based on two components: a) exploration (period of reflection and testing of various roles and life plans) and b) commitment (degree of personal investment or adherence to a specific set of goals or values, expressed in a course of action or belief). Thus, by assessing exploration and commitment in individuals, four statuses in identity development could be identified: a) achievement identity, b) foreclosure, c) moratorium, and d) diffusion. Subsequently, some refinements were introduced that nuanced or extended the four states originally proposed (Kroger & Marcia, 2011).

It should be noted that the status approach seeks to consider the identity formation process by basing its evaluation on the sub-processes that make it possible. However, the original emphasis of this perspective was more focused on the current conception of these processes (Kroger & Marcia, 2011). This meant that, in the end, this approach omitted the way in how people participate in the exploration and the way in how they acquire the respective commitments (McLean & Pasupathi, 2012).

However, and beyond the mentioned limitations, the two conceptualizations have originated important findings that today strengthen vocational identity as a theoretical construct within psychology. Thus, the two conceptualizations have made possible the statistical association of vocational identity with significant rates of progress in the career development of adolescents and young adults. In this regard, different research can be consulted (Creed et al., 2020; Hirschi, 2011c; Kvasková et al., 2022; B. Lee et al., 2020; Y. Lee et al., 2022; Li et al., 2019; Meijers et al., 2013; Pizzolitto, 2021; Porfeli & Savickas, 2012; Savickas & Porfeli, 2011), whose results show the relevance of the construct in mediating the integration of the

self with occupational knowledge and therefore, of influencing vocational behavior (Jara-Castro, 2010; Y. Lee et al., 2022).

Another theoretical and empirical association that has been made of vocational identity is with some constructs as psychological well-being, purpose, satisfaction, and meaning in life (di Palma et al., 2021; Green, 2020; Hirschi, 2011a, 2012a, 2012b; Hirschi & Herrmann, 2012; Kvasková et al., 2022; Strauser et al., 2008). These constructs constitute manifestations of a protean career orientation (Hall, 2004), a notion to which vocational identity has also been related (Hirschi et al., 2017; Steiner et al., 2019). Protean career orientation refers to the motivation of individuals to take responsibility for their professional development, focusing their careers on continuous learning and the achievement of their values to reach subjective or psychological success. Evidence suggests that protean career orientation is a facilitator of a clear vocational identity.

All the results presented in the research studies consulted provide evidence of the way how vocational identity provides people with a sense of direction and meaning in life. This is to the extent that vocational identity organizes and summarizes self-referential information based on what human beings direct their actions in the occupational sphere (Christiansen, 1999; Meijers, 1998; Skorikov & Vondracek, 2011). Identity endows the actions of individuals with intentionality while strengthening their sense of agency by adapting their actions to a set of meanings about themselves.

Having clarified the origin of vocational identity, we will now develop a conceptualization based on the assumptions of social constructivism and cultural psychology, both theoretical coordinates already addressed in a previous part of this text. Based on these conceptual positions, some elements are introduced that seek to overcome the limitations pointed out in the dominant paradigms and allow for a deeper understanding of the vocational phenomenon.

Vocational Identity, Cultural Psychology, and Possible Vocational Worlds

This section presents a conceptual model of vocational identity, proposed as an alternative for approaching the phenomenon of vocationality in psychology. This proposal is mainly based on theoretical approaches (some of them have already been mentioned) and empirical results generated by research carried out by the authors of this proposal (to be published by the authors themselves in another article). Theoretical approaches include Bruner's cultural psychology (1990, 1996, 1997, 2005, 2008), as previously indicated. Also, the approaches to identity from the socio-cultural perspective worked by D. Holland & Lachicotte (2007; Lachicotte, 2012). The notion of vocation elaborated by Billett (2011), and the notions of vocational identity enunciated by Meijers (1998), and Skorikov & Vondracek (2011), that served as basic notions for the theoretical proposal. The sub-components identified by Porfeli et al., (2011), based on Marcia's classic approaches (1966), were also taken up as fundamental to operationalize vocational identity as a construct. Finally, the empirical results derived from qualitative research on the construction of vocational identity in young university students in the city of Medellin, Colombia (to be published by the same authors in another article), served as a basis for identifying other components of the model. These components were the two dimensions that make up vocational identity (personal and socio-cultural) and the mechanisms that guarantee the interaction between these two dimensions (practical and interactive experiences). The proposed theoretical model is formulated and explained below.

According to Billett (2011), vocation refers to experiences with satisfactory and meaningful occupational practices for the individual, whose exercise provides him/her with a sense of self, i. e. identity. Vocations would be central to people's life purposes and would describe activities that have social value and provide lasting personal

meaning. Accordingly, from the perspective of cultural psychology, it could be argued that vocational identity constitutes a structure in constant formation, made up of a changing set of meanings through which individuals link their motivations, interests, and competencies with acceptable career roles (Meijers, 1998; Skorikov & Vondracek, 2011). That is, meanings of self that could be related to occupational practices.

From the above perspective, vocational identity, rather than a product, would constitute a process in which people negotiate and integrate meanings of themselves with the norms and activities related to an occupation. Vocational identity, therefore, represents the synthesis resulting from the interaction between individuals' perception

of the occupational world and their perception of themselves (Klotz et al., 2014). The way these different components and dimensions are integrated is illustrated in Figure 1.

As a structure of meanings in permanent construction, vocational identity will allow organizing in a narrative format, feelings, understandings, and knowledge related to a personally valued and socio-culturally available occupational position (D. Holland & Lachicotte, 2007; Lachicotte, 2012). This structure will operate as a mediator of the vocational behavior of individuals, and as such, will order their actions in the occupational sphere, giving them an intentional character according to their vital scenarios and their biographical and socio-cultural worlds.

Figure 1

Conceptualization of Vocational Identity from the Perspective of Cultural Psychology (Own elaboration)
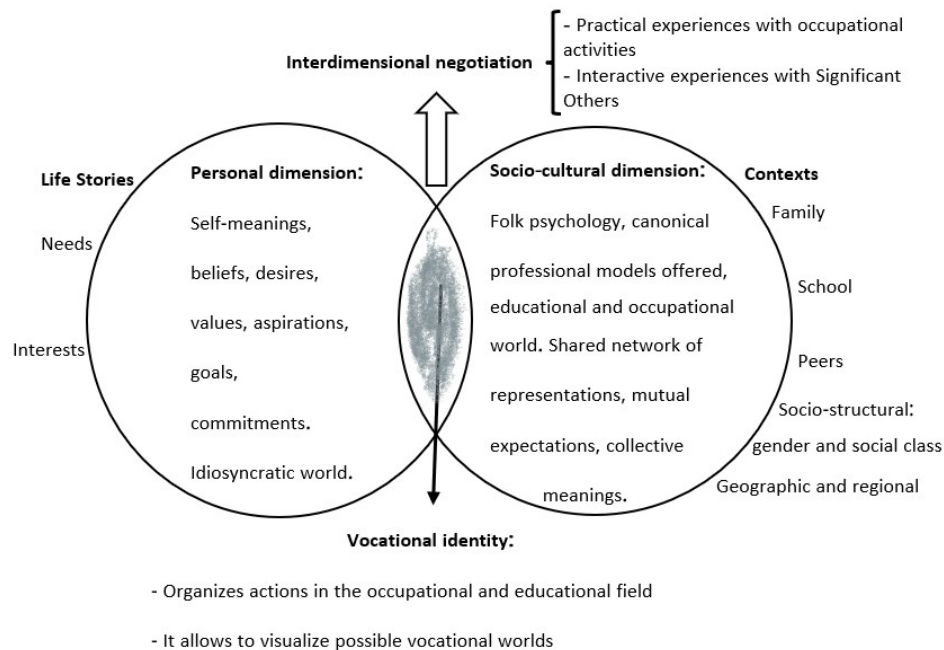
Accordingly, the sub-processes that are traditionally recognized as constituting vocational identity, namely career exploration and commitment to a career, represent actions derived from the set of emerging meanings that make up this construct (Porfeli et al., 2011). In this way, vocational identity will be expressed and materialized in actions as

exploration, choice, and commitment to a particular occupational field; behaviors organized according to a self-referential concept. On the other hand, the immersion of individuals in concrete educational and work experiences, as well as the interaction with significant social references, will promote a constant reformulation of vocational identity.

This reformulation process will be facilitated by a narrative configuration that will shape it. The narrative configuration will make possible the continuous incorporation of new information into the plot of a vocational life that gives meaning to new experiences, without prejudice to previous ones. All this will favor the projection of new lines of action by individuals in the occupational area. Thus, vocational identity will make possible vocational worlds visible. Possible vocational worlds are occupational or educational environments, scenarios for the exercise of activities that individuals recognize as meaningful and satisfactory for their life purposes and goals (Billett, 2011). In this way, access to possible vocational worlds will stimulate career exploration and commitment, giving processual functionality to vocational identity.

In terms of its construction, as illustrated in Figure 1, vocational identity is configured based on two dimensions, one personal and the other sociocultural. The first would be given by the idiosyncratic world of individuals, a component derived from their life stories and constituted by beliefs, desires, values, aspirations, goals, intentions, hopes, and commitments; meanings of self, that express interests and needs, and which require the socio-cultural dimension to be fully manifested. In contrast, the socio-cultural dimension will be determined by the dominant folk psychology in the developmental contexts where people participate. This dimension represents a normative framework that informs individuals about the canonical vocational models to be considered for their identity defined in terms of occupation. That is, the admissible and desirable ways to build a life project based on a profession.

Accordingly, the first dimension will be mediated by the interests and needs of the personal world of individuals that, in turn, will find expression in the socio-cultural worlds of which they are a part. The two components mentioned above, the personal and the sociocultural, will maintain a constant dynamic of negotiation that

takes place thanks to two mechanisms. On the one hand, the contact of individuals through direct experiences with occupational and/or educational practices. On the other hand, through interaction with significant social referents who, with their actions, stories, or forms of social support, exemplify, encourage, or empower people to choose or discard possible vocational alternatives. As a result of this negotiation process, the vocational identity would emerge.

People will appropriate the meanings underlying the conventional occupational practices exercised in their daily contexts and based on this, they will begin to configure or reconfigure their vocational identity. In this way, the set of mutual expectations, communal representations, and meanings embodied in the culture end up shaping the vocational identity. The culture embodied in the popular psychology of family, school, or peer contexts, in addition to shaping identity, will also impose limits on the way in how individuals can operate. This is because culture mediates and delimits the scope of the actions of individuals in the different spheres in which they choose to work.

Thus, it is possible to affirm that even though the personal dimension requires the mediation of the socio-cultural dimension for an individual to commit to an occupational or educational alternative and recognize it as his or her vocation, the experiences with that particular option must be personally meaningful and of value to him or her. Commitment implies the choice of an occupational path and a clear identification with this choice. In other words, the establishment of a personal link with the career decision made by the individual is required, allowing the development of a subjective connection or link that reflects the individual's trust and attachment to the chosen occupational field. The social dimension contextualizes and shapes the configuration of vocational identity, but it is the personal dimension that justifies the commitments that people make to a given career alternative.

It should be noted that even if people engage in a variety of career, occupational or educational practices, not all will be evaluated as fundamental for maintaining and consolidating a sense of self. The recognition of a professional field as a vocation will depend on the one hand, on the meaning that an occupational practice may have for a person in terms of the contribution it makes to his or her identity. On the other hand, the resources in terms of occupational or educational practices and discourses, available in the different development scenarios and which will serve as a basis for constructing possible vocational worlds in different career fields.

Therefore, in its configuration process, the vocational identity will be distributed among the developmental contexts of individuals. That is, among the scenarios of collectively shared meaning where collective scaffolding dynamics take place, materialized in support structures or assistance in the framework of the daily interactions that significant others routinely provide. This scaffolding will facilitate the appropriation of the dominant meanings in the social interactions of each of the socio-cultural environments where people live. From this perspective, the value of the narrative approach to the vocation will be highlighted, as it will allow individuals to integrate different experiences with occupational and educational activities into an autobiographical account. The plot or central argument of these autobiographical stories will be linked to the construction of a possible vocational world based on a career.

Whether or not people can see themselves performing work related to an occupational environment, it will depend on whether it is in harmony with the interests and needs that make up the personal dimension of their lives. In addition, these occupational tasks must be in line with the canonical requirements of the social environments in which individuals act daily. The latter will become the cornerstone for the configuration of possible vocational worlds.

Practical Implications

Implementing the proposed conceptual model of identity as a strategy to address vocational behavior and its manifestation in possible educational and professional choices of individuals, entails differential aspects. These aspects will be highlighted below.

First, a narrative approach to vocation and career choice as the one proposed would give access to the phenomenological world of individuals. This would increase the veracity of the process since the lives of individuals, with all their subjective implications, concerns, and experiences, would be brought to the foreground. This, in turn, makes it possible to maintain the process of constructing a vocational identity in the context of everyone's life. In this way, the imposition of psychometric realities that in a decontextualized manner seek to align individuals with work environments based on traits that describe dominant aptitudes is transcended. Thus, with a narrative perspective of vocational identity, it is possible to highlight the value for an individual to feel personally linked to an occupational or educational activity. In other words, the subjective meaning of exercising a profession.

In the applied field of educational counseling, implementing narrative methods would allow us to understand the psychosocial dynamics inherent in the construction of identity meanings of young people. This self-referential information is subsequently used by the young people to interpret occupational and educational experiences from which they intentionally orient their actions towards the formulation of a life project. It would also facilitate the identification of barriers that scenarios as gender, socioeconomic level or religion impose on the construction of identity and, of course, the obstacles that these scenarios represent for people to visualize possible vocational worlds. All of which would encourage the consolidation of biographically congruent life projects that is, based on the individual's own experiences congruent with the economic and political realities in which

individuals live to promote their empowerment in the face of an increasingly volatile contemporary labor market.

Conclusion

The historical and conceptual journey made in this article showed that in epistemological terms, vocational psychology transited from a mechanistic paradigm represented by a person-environment fit model (emphasis on traits) to an organicist vision. This organicist vision was based on developmental premises and became a model anchored in evolutionary stages, that later gave rise to what was called vocational development. Currently, a contextualist approach has emerged, based on cultural psychology and the use of narrative as a discursive tool. With its functional characteristics, narrative equips individuals with the reflective skills necessary to take responsibility for their own occupational and educational trajectory. The latter option is positioned as the most pertinent and viable in contemporary times, given the profound changes that have taken place in current labor structures and dynamics. In this new scenario, vocational identity emerges as a key construct to approach the study of vocational behavior. This is because vocational identity considers the socio-cultural dynamics that contextualize it and shape the actions of individuals in a constantly changing work and academic environment.

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"Gratitude Is Thanking Someone, and Happiness Is Showing It": A Qualitative Study of Colombian Children's Perspectives on Gratitude

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Abstract

As a character strength, gratitude is linked with positive emotions and can potentially provide many benefits to children and adolescents. Yet little is known about how and why children typically experience gratitude, and how to promote its development. We conducted 10 focus groups and written exercises with 38 Colombian fifth-graders (19 girls and 19 boys), from one public school and two private schools, to explore different components of their gratitude experiences, namely, the benefactors, benefits, feelings, and behavioral expressions associated with gratitude, using a theoretical/deductive thematic analysis. There were many commonalities in the themes of the gratitude elements found in both girls' and boys' answers, and in both public and private schools. One element of gratitude not anticipated in the analysis was the degree of effort that children saw benefactors (particularly family members) investing in them. These findings can be used to inform educational interventions, making them more relevant to children in Colombian and other Latin American contexts.

Keywords: Benefactors, children's emotions, family, gender, gratitude expression, type of schooling.

"La Gratitud es Agradecer a Alguien, y la Felicidad es Mostrarlo": Un Estudio Cualitativo de las Perspectivas de Niños Colombianos Sobre la Gratitud

Resumen

La gratitud como fortaleza del carácter está relacionada con las emociones positivas y potencialmente puede brindar muchos beneficios a los niños y adolescentes. Sin embargo, se sabe poco sobre cómo y por qué los niños suelen experimentar la gratitud y cómo promover su desarrollo. Realizamos 10 grupos focales y ejercicios escritos con 38 estudiantes colombianos de quinto grado (19 niñas y 19 niños), de una escuela pública y dos escuelas privadas, para explorar diferentes componentes de sus experiencias de gratitud: los benefactores, los beneficios, los sentimientos y las expresiones comportamentales asociadas a la gratitud, mediante un análisis temático teórico/deductivo. Hubo muchos puntos en común en los temas de los elementos de gratitud que se encuentran en las respuestas de las niñas y los niños, y en las escuelas públicas y privadas. Un elemento de gratitud que no se anticipó en el análisis fue el grado de esfuerzo que los niños vieron que los benefactores (particularmente los miembros de la familia) invertían en ellos. Estos hallazgos pueden usarse para informar intervenciones educativas, haciéndolas más relevantes para los niños en contextos urbanos de Colombia y otros contextos latinoamericanos.

Palabras clave: benefactores, emociones infantiles, expresión de gratitud, familia, género, tipo de escolaridad.

GRATITUDE IN human beings is a complex concept that can be theorized in multiple ways, including as an emotional state, a moral virtue, and a character strength. According to Watkins (2014), gratitude as a positive emotion is experienced when a *beneficiary* recognizes that something good has happened to them and that another person (the *benefactor*) is largely responsible for providing this *benefit*. This definition highlights the social character of gratitude, which promotes positive relationships by motivating individuals who experience it to reciprocate benefits to people who provided them (Algoe et al., 2008). The social and moral functions of gratitude were explored by McCullough et al. (2001), who integrated several theories that conceptualized gratitude as a moral emotion. They argued that since feeling gratitude stimulates behaviors in favor of a benefactor's wellbeing, it helps us build societies based on the common good. McCullough & Tsang (2004) extended this theory by arguing that gratitude fulfils the function of a "moral barometer" and depends on social-cognitive processing. That is, people are more likely to experience gratitude when they receive a benefit highly valued by them, when they recognize that the benefactor has invested a high effort or cost to provide that benefit, and when they notice that the effort invested by the benefactor was intentional rather than accidental.

In addition to being experienced as a transitory moral emotion based on social cognitive skills, the moral aspect of gratitude has been viewed in positive psychology as a lasting character strength that promotes various virtues (Peterson and Seligman, 2004). These authors linked gratitude with the virtue of "transcendence," which they related to seeking meaning in life and promoting holistic connections with the universe. More recently, the relationship of gratitude to the concept of virtue has been further elaborated by several other researchers. For example, Merçon-Vargas et al. (2018) proposed a definition of gratitude as a "moral virtue" including, in addition to the beneficiary, a benefit and a benefactor, the positive feelings related to the benefactor's action, and the desire to freely return the benefit received to the benefactor. Hence, the virtue of gratitude encourages positive emotions by raising our consciousness of a benefit that has been granted to us (McCullough et al., 2001; Ruch et al., 2021).

A consequence of the conceptualization of gratitude as a character strength linked to the promotion of virtues is the recognition that such strengths can (and should) be cultivated during childhood, adolescence, and youth, leading to interest in the development of educational interventions for this purpose. Research has shown positive effects of gratitude on young people's wellbeing. For example, Froh et al. (2011) observed that expressing gratitude improved the social interactions of US adolescents, their emotional functioning, and wellbeing. Gratitude has also been shown to promote prosocial behavior and generosity in US undergraduates and high school students (Bartlett & DeSteno, 2006; Bono et al., 2019); the latter study also found that it was important for the maintenance and strengthening of close social relationships. Other authors linked higher levels of gratitude with better academic and psychosocial adjustment, and hence with the emotional wellbeing of school-aged children (Furlong et al., 2013; Tian et al., 2015). Likewise, in general, it has been shown that social skills training in fifth graders is maintained over time and has an impact on the reduction of behavioral problems and improvement in academic performance (De Souza et al., 2022).

Given these demonstrated benefits of gratitude for young people, the developmental prerequisites for experiencing gratitude in childhood have been an important puzzle for researchers to solve. As early as the 1960s, Tesser et al. (1968) indicated that gratitude depends on three specific aspects of the beneficiary's perceptions: the perceived intentions of the benefactor, the perceived costs accruing to the benefactor, and the perceived value to the beneficiary. Poelker & Kuebli (2014) examined the development of US elementary schoolchildren's abilities to appreciate the intentions and efforts of benefactors in giving

them a desirable or an undesirable gift. Their results indicated that fourth and fifth graders could recognize a benefactor's effort independently of the value they placed on the benefit received. On the other hand, while children's gratitude may still be influenced by a representation of the costs as perceived by the beneficiary, Australian and British adolescents tended to accurately identify the benefactor's intentions in providing a benefit (Morgan & Gulliford, 2017). In a longitudinal study with Chinese elementary schoolchildren, Wu et al. (2020) found an upward trajectory in the development of gratitude: that is, older children were better able to recognize good acts that other people performed for them and to value such acts as positive influences in their lives.

Another important development takes place in the ability to recognize the value of benefits received. Tudge et al. (2015) review the tendency in younger children (7-10 years old) to focus on more immediate material benefits and to express their appreciation through tangible objects. However, as they mature into adolescence (11-14 years old), children display a greater capacity to consider the context of the benefactor's situation when expressing their gratitude for benefits of low material value. Along these lines, several studies carried out in Latin America have reported differences in the type of benefits that children from different sociocultural contexts identify, in Brazil (Freitas et al., 2011; Palhares et al., 2018), Argentina (Cuello & Oros, 2016; Oros et al., 2015), and Guatemala (Poelker & Gibbons, 2018). A common finding was that participants from low-income families tended to be grateful for more material benefits than their peers from better-off families, who expressed gratitude for more abstract benefits, such as feelings or social connections. This represents a potential target for educational interventions, as in that of Froh et al. (2011), who showed that promoting gratitude in an educational setting decreased the levels of materialism in North American adolescents.

Increasing understanding of the emotions associated with gratitude has been another focus

for interventions in young people. Such emotions, including joy, pride, enjoyment, and hope, have also been linked with educational achievement in Filipino children (Magno & Orillosa, 2012). According to these authors, a corollary of the links with positive emotions is that when young people experience more gratitude, they tend to feel lower levels of negative emotions such as anger, grief, or boredom. Similarly, Poelker et al. (2019) reported that promoting perspective-taking in Guatemalan children increased their feelings of gratitude and decreased feelings of envy.

Additionally, emotion comprehension can be linked to gratitude, in the sense that children develop an ability to recognize that expressing gratitude can foster positive emotions in their benefactors and others. Freitas et al. (2011) established that expressions of gratitude differ substantially according to age (see also Freitas et al., 2021; Oros et al., 2015; Palhares et al., 2018). Children first express gratitude verbally (saying thank-you), a form of expression that was present across the entire age range of Freitas et al.'s (2011) study with US children aged 7 to 14 years. On the other hand, concrete expressions of gratitude (giving a gift of one's own preference to a benefactor) occurred more often in 8-year-olds than in younger children. Likewise, from the age of 12, as they got better at understanding a benefactor's point of view, children began to express gratitude in connective ways, which implied being useful and kind to someone who helped them or showed generosity. Finalistic expression of gratitude (which means trying to improve permanently as a person in response to a benefactor's good deed) did not appear until adolescence.

Research on gratitude in young people indicates that both the expression and the experience of gratitude can vary according to gender, but not always in systematic ways. In Argentina, Oros et al. (2015) encountered differences in the reasons for which middle-income girls and boys experienced gratitude. Boys felt more gratitude for material goods and prosocial behavior (favors and help given), while girls experienced it more

for friendship, school, and affection. These diffe-rences were not found between girls and boys in more vulnerable socioeconomic conditions. Guse et al. (2019) found that adolescent South African girls experienced gratitude more frequently than boys, and showed higher levels of satisfaction with school, friends, and self. Froh et al. (2009) likewise showed that 11–13-year-old girls in the US tended to report slightly more gratitude than boys. In line with these results, Tian et al. (2015) found that 4th-to-6th-grade Chinese girls reported significantly greater gratitude than boys. On the other hand, Freitas et al. (2011) did not identify gender differences in 7–14-year-old Brazilian boys' and girls' expressions of gratitude. It is also worth noting that many of the above authors who did find gender differences explicitly recognized that their results were exploratory and inconclusive.

As this literature review has shown, there is an academic consensus that gratitude is a character strength whose development can bring about many positive effects in young people's lives. However, there is still much uncertainty on how and why experiences of gratefulness vary between indi-viduals and cultural contexts. The current study addresses this uncertainty by defining gratitude as a character strength marked by certain necessary elements, including both a benefit (an object, favor or experience positively valued by a person) and a benefactor (the person or entity who provides the benefit). To gain a greater understanding of Colombian children's experience of these different elements of gratitude, our study was guided by the following research questions:

RQ1. To whom are Colombian girls and boys grateful?

RQ2. For what kinds of benefits do they experience gratitude?

RQ3. Which emotions do they associate with experiences of gratitude?

RQ4. How do they express gratitude?

RQ5. What are the particularities and com-monalities in gratitude experiences by gender and socioeconomic conditions?

Answering these questions can help identify differences and similarities in how the elements of gratitude are understood and characterized in preadolescence, enabling us to design culturally and individually sensitive interventions that can harness the power of gratitude to enhance children's positive social development. We addressed our research questions through a deductive thematic qualitative analysis of focus group discussions between fifth-grade children at public and private schools in Bogotá, Colombia. Fifth-grade children were targeted because this age group (around 10-12 years) stands on the cusp of important social and emotional changes between childhood and ado-lescence (Ingram, 2019), making them, in theory, particularly receptive to interventions that can enhance their social and emotional development in positive ways. In Colombia, fifth grade is also the last grade of elementary education before the transition to secondary education, which con-fronts children with new situations and academic and social challenges that will require the use of various socio-emotional skills. On the one hand, using focus groups, we hoped to identify discussion elements of a shared culture surrounding gratitude practices that could be used to create interventions that would have a broad appeal for many Colom-bian children, as well as points of disagreement on the nature of gratitude. On the other hand, the use of "gratitude books" (described below) served to concretize and particularize individual children's gratitude experiences. The results of the focus group and gratitude book analysis helped inform the design and evaluation of an educational program to strengthen and promote gratitude in school contexts, a process that will be reported in later publications.

Method

Participants

The sample comprised 38 fifth-grade students (19 girls and 19 boys), aged 9-14 years (M = 10.53, SD = 0.91), from two private schools and one public

school in inner Bogotá, Colombia. Of these, 32 participants were Colombian, 2 Venezuelan and 1 from the USA, while nationality information was not provided for the remaining 3 participants. The public school provides education for families of low socioeconomic status, while the two private schools are mainly attended by students of inter-mediate socioeconomic status.

Procedure

Data was collected in two sessions in May 2019. In the first session, that lasted about half an hour, children were introduced to the concept of gratitude. The research team gave the participants a notebook called *The Gratitude Book* and asked them to draw people, things, places, and moments that made them feel grateful, and record their reasons for feeling gratitude in these contexts. Gratitude books were given to all members of the classes in which we worked and were filled in as part of their normal class activities. (Further analysis of all the children's books, rather than only those belonging to the subset of children who participated in the focus groups, will be the subject of a future publication.)

In the second session, focus groups with 3-6 children each, lasting 30-40 minutes, were implemented in each school, with a subset of participants chosen by their class teachers as likely to give rich responses. Ten focus groups were carried out: four in private schools (two with boys and two with girls) and six in the public school (three with boys and three with girls, one separately for each gender in each campus of the school). These were conducted by two teams of 2-3 principal investigators (PIs) and research assistants (RAs; an all-female team for the girls' groups and an all-male team for the boys'). The PIs were mainly responsible for delivering and following up on the questions, while the RAs helped maintain all the children's attention and recorded their answers.

At the start of each focus group, participants were given a few minutes to review their own

Gratitude Book, to remind them of what they had recorded in it. The conversation script followed in all focus groups included the following issues to be discussed:

1) Someone whom children had named in their *Gratitude Book*, what made them feel grateful towards them, and why.

2) An experience of gratitude described in the book, including to whom they felt grateful in the situation, and what they were thinking and feeling at the time.

3) Someone whom the participant could think of at that moment, to whom they felt grateful but had not included in the book.

4) How they typically expressed gratitude to the people they had named.

All focus groups were audio-recorded and transcribed by one of four undergraduate RAs. In addition to the transcripts of the 10 focus group discussions, 22 of the focus group participants gave permission for their gratitude books to be included in the study, for a total of 32 items forming the data set on which the analysis was performed to answer the five research questions. The study was approved by the Ethics Committee of the Universidad de los Andes, Colombia. All parents or guardians signed a consent form authorizing the participation of their children, the recording of the sessions, and the use of the information collected for research purposes.

Analysis

The transcripts and gratitude books were analyzed using NVivo 12. A theoretical-deductive thematic analysis was used to identify themes across the data set (Boyatzis, 1998; Braun & Clarke, 2006). Four analytical categories (benefactors, benefits, feelings associated with gratitude, and expressions of gratitude) were previously established based on the theoretical framework of gratitude elements that guided the research questions. Analysis was conducted independently by two RAs (postdoctoral assistants who joined the project after data was collected) in three moments of analysis. In the first

moment the RAs reviewed the 32 items included in the analysis to familiarize themselves with the data, since they had not participated in data collection. In the second moment, initial codes were generated with three one-to-one discussions between RAs, to reach consensus on coding (Boyatzis, 1998). In a third moment, three meetings were held with a PI, who had participated in data collection, to reach consensus on the themes.

The second analytical moment (the generation of initial codes) consisted of three rounds. In the first round of analysis, the transcripts of the public school's focus groups for both girls and boys were independently coded by the two RAs. In this round, the main codes were identified for each of the four pre-established theoretical categories of gratitude. Later, there was a meeting to discuss the coding of the material and reach consensus on the content and definition of the codes identified. In this first round, the percentage of agreement was 93.3% across 393 elements. In the second round, the researchers independently analyzed the private schools' focus groups for both girls and boys, and met again to discuss the coding and adjust the codes identified. In this round, the proportion of agreement was 99.2% across a further 217 elements. In the third and final round of analysis, the researchers independently analyzed the content of all the gratitude books and met to discuss the coding and readjust the codes with the additional information provided by the books. In this round, the proportion of agreement was 99.7% across a further 823 additional elements, for a total of 1433 elements spread over 32 primary sources. In this third meeting round, the first proposal for themes within the pre-established theoretical scheme of gratitude was discussed with the PI. All codes were considered regardless of their frequency, with the intention of capturing the presence of the wider spectrum of issues mentioned by the children regarding the elements of gratitude that could be identified in the data. Two subsequent meetings were held to review and define the themes based on the theoretical framework until consensus was reached on the identification of the themes, whereupon NVivo 12's coding outputs were used to build the thematic tree.

Once the themes had been defined, two types of differences were explored to identify possible particularities and commonalities by creating cases with the NVivo tool for each condition and comparing them as follows: 1) girls and boys, to identify the characteristics of the coded material disaggregated by gender; 2) public and private schools, to identify the characteristics of the material disaggregated by a proxy for socioeconomic status. Then, using the data reporting tools of NVivo 12, diagrams were constructed to represent commonalities and particularities in the distribution of the extracts in the dataset by gender and type of school. Finally, the results of all these analyses and the process of producing the report were discussed and prepared jointly with the entire research team (including all the authors of the current article).

Results

We first report the various themes and subthemes belonging to the pre-established, theoretically derived elements of our gratitude analysis: benefactors, benefits, feelings, and expressions of gratitude. During analysis, a fifth category not included in the pre-designed list was identified: the effort that children recognized in their benefactors. In parentheses we give the percentage of extracts for each element that belonged to each theme, followed by examples of the most prevalent themes. Examples of textual extracts from the focus group discussions are presented in tables, while illustrations and writing from the participants' gratitude books for the most salient themes relating to the Benefits element are shown in Figure 1. Finally, we present the results of the comparative analysis by gender and type of school.

Benefactors to Whom Children Were Grateful

For the analytical element of benefactors, two themes were identified: interpersonal (six

sub-themes) and personifications (three sub-themes), for a total of nine types of identified benefactors. In the interpersonal theme, members of the nuclear family predominated (48.8% of all benefactors mentioned). Different nuclear family members were mentioned: mother, siblings, and father or stepfather. This theme also included members of the extended family (17.1%), namely grandparents, cousins, and aunts and uncles, as well as deceased family members (1.5%). At the interpersonal level outside the family, some participants identified peers as benefactors (7.5%), especially those with whom they interacted in the school context, including both personal friends and fellow students in general. They also recognized their teachers (7.5%). Children only occasionally recognized other adults who were part of their community as a source of benefits (2.09%): specifically, service providers such as shopkeepers, security personnel, and health workers.

The second theme corresponded to children's personification of animals, institutions, and abstract entities as sources of benefits (and therefore targets of gratitude). Subthemes included God, life, and nature (15.33%); as well as the institutions that children belonged to (4.19%), such as the church, community organizations and their school; and their pets (3.89%). See Table 1 for example quotes from some of the subthemes.

Table 1
Example Quotations for Salient Themes of Benefactors

Theme: Interpersonal	Example extracts
Nuclear family	"I am grateful to my mother because she supports me and also makes my life happy, and she gave me my sisters, whom I play with and have fun." (GF1Aa)
Peers	Researcher: "A, you said 'friends': what makes you feel grateful towards your friends?" Boy A: "Because they accompany me at recess, because I play games with them." Boy B: "They are always with us, so we don't feel alone." (GF1Ao)
Teachers	Boy C: "My teachers." Researcher: "C, why would you feel grateful to the teachers?" Children: "Because they teach us!" [Everyone laughs] Researcher: "But why is it good to be taught?" ... C: "They teach us things we must learn to get ahead, to be someone in life." D: "To be a professional." (GF1Ao).
Theme: Personification	
God, life and nature	Boy: "Thanks to life we can be where we are, at school and studying, we can continue with our life, we can grow old, we can have fun." (GF1Ca)

Benefits for Which Children Experienced Gratitude

The element of benefits showed the most richness in terms of the different themes (13) that were identified in children's gratitude experiences. Thirteen different reasons for which children felt gratitude were identified. The most common themes included material living conditions (24.45%)—having a house, a room to sleep in, and food to eat; the opportunity to have pleasant experiences (21.26%) such as going for a walk, going on a trip, or celebrating special moments; and receiving life (10.68%) associated with their mother and father, God, or health workers. Children also recognized as a benefit other people's caring behaviors towards them (9.80%), e.g., taking them to the doctor or cooking for them (see Figure 1 for examples of these four benefits).

Figure 1

Examples of Drawings for Some Benefit Themes
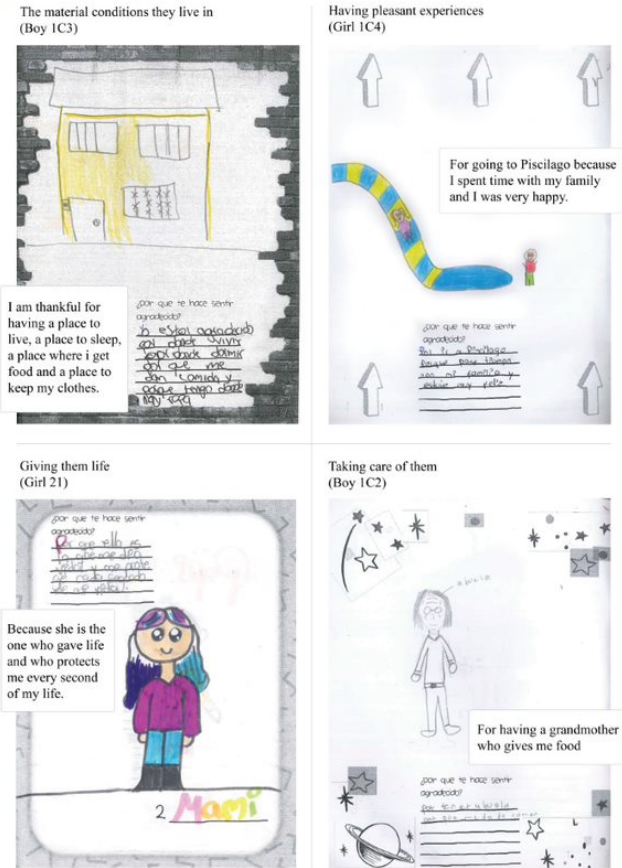
Children also mentioned the benefit of being taught something (7.71%), whether this was academic, playful (such as new video games) or life lessons. This benefit was particularly associated with teachers, family, and friends. Other benefits included behaviors by which affection was expressed to children (7.27%), through loving words and physical contact such as hugs; certain gifts that they received (7.16%), including clothes, toys, or musical instruments; behaviors by which people expressed solidarity (5.40%), by supporting them in difficult times or giving them advice; and opportunities for personal growth (3.41%), through support in the development of academic or recreational activities. Consistent with the personification of abstract benefactors described above, a few participants also expressed gratitude for what nature provided them (2.53%), including water, plants, and oxygen. One boy was grateful for God's compassion in resolving the pain of a loved one who had died. A girl was grateful for the job opportunities her parents had thanks to wider family support, while a boy was grateful because an unpleasant experience no longer occurred (a classmate who had been bothering him was no longer at that school).

Feelings that Children Associated with Gratitude Experiences

Children identified various feelings associated with their gratitude experiences. Five feelings were coded in the focus groups: joy/happiness (73.33%), a general experience of feeling good (10%), nostalgia (6.67%), desire to return a benefit (6.67%), and love (3.33%). These feelings were divided into two themes: feelings experienced when receiving a benefit, and feelings experienced when expressing gratitude (see Table 2).

Table 2

Example Extracts for the two Themes of Feelings

Element: Feelings Theme		Example extracts
Feelings when receiving a benefit		
	Love and joy/happiness	Girl: "I am grateful to my mother because she gave me life and because she was the one who helped me all this time…" Researcher: "When you feel that gratitude what do you feel in your body?" Girl: "Happiness." Researcher: "Do you feel anything else?" Girl: "Nerves… and now… love!" (GF1Ba)
Emotions when expressing gratitude.	Joy/happiness	Girl: "Gratitude is thanking someone, and happiness is showing it." (GF3a)

Children's Expressions of Gratitude

For this gratitude element, different expressions were coded with pre-established themes according to the theory of increasing complexity of types of gratitude expression, using the classification of Freitas et al. (2021) as a guide. In all groups, four forms of expression of gratitude were identified (see Table 3): concrete (46.46%), verbal (27.78%), connective (17.17%), and finalistic (8.59%).

Table 3
Example Extracts for Children's Gratitude Expressions

Theme: Types of gratitude expression		Example extracts
	Concrete	Boy 1: "Well, with mothers, for example, I gave her a rose. She gave me a kiss, gave me a hug, and was happy." Boy 2: "I made her a little box and wrote her a letter, and she was happy and hugged me." (GF1Bo)
	Verbal	Researcher: "What did you do when they gave you the cellphone? Who gave it to you: your mommy?" Girl: "I said thank you and hugged her." (GF1Aa)
	Connective	Boy: "Well... I give [them] a hug... I also give a thousand thankyous and then I can do [them] a favor too." (GF3o)
	Finalistic	Girl: "To my mother. I help her cleaning the house and the kitchen... I think she will be grateful for having a daughter who helps her." (GF1Aa)

Efforts that Children Identified in Benefactors

Effort was an element of gratitude not included in the initial theoretical structure of the analysis. Nevertheless, it was found in extracts from both girls and boys, from both public and private schools. Children were not directly asked about this aspect of gratitude in the focus groups; rather, it was identified in the analysis when children explained the reasons for being grateful for a particular benefit. Five themes were identified in this analytical element, the first being the recognition of the benefactor's hard work (47,62%), like valuing the energy demanded to make things happen on a daily basis or the struggle they went through to care for the beneficiary. A second theme was the effort the benefactor needed to understand the beneficiary's needs (23.18%), like being patient, or putting themselves in the beneficiary's shoes. Time investment by the benefactor was another theme identified (19.05%), including personal time or the time needed to do something. The use of benefactor's financial resources (4.76%) was mentioned by one boy and putting the beneficiary's needs above the benefactor's (4.76%) was also mentioned by another one. See Table 4 for examples.

Table 4
Example Quotations for the Effort Associated with Gratitude-Related Situations

		Example quotations
	Hard work by the benefactor	Boy: "Even if you don't have money, at least write a letter to your mother saying thank you... because mothers make a lot of effort, so you don't see that your mother is struggling for you, working to at least give you food, have bread on the table. She is working for us to go far." (GF1Co)
Element: Effort	Time invested by the benefactor	Girl: "I thank her every day, when my mother hugs me and has time for me, because she also has time for my sisters and work, for so many things..." (GF1Ca)

Particularities and Commonalities by Gender and by Type of School

As indicated in the Methods section, once all the material had been processed, four different contexts were analyzed: girls, boys, public school, and private school. The aim was to identify the presence or absence of the themes within the gratitude element in the aforementioned contexts. To this end, coding tables were created for the percentages of themes mentioned across the different contexts (see Table 5).

Table 5

Proportions of extracts belonging to each theme in every element, by gender and SES

Element	Theme/Code1	Gender		SES	
		Girls (%)	Boys (%)	Private (%)	Public (%)
Benefactors	Specific person	88.8	92.8	98.8	87.6
	Personification	11.2	7.24	1.18	12.4
Benefits	The material living conditions un which they live	15.7	26.7	13.0	24.9
	The opportunity to have pleasant experiences	26.0	17.5	23.8	20.6
	Receiving life	7.05	8.08	3.24	9.26
	Recognition of the behaviors that other people carried out to take care of them	8.33	10.9	10.8	9.26
	The benefit of being taught something	7.05	6.13	9.73	5.35
	Behaviors by which affection was expressed to children	8.33	6.13	8.65	6.58
	Gifts that they received	9.62	5.85	6.49	8.02
	Behaviors by which people expressed solidarity	13.8	10.6	20.0	9.05
	Opportunities for personal growth	1.60	4.74	3.78	3.09
	What nature provided them	2.24	2.79	0.54	3.29
	God's compassion in resolving the pain of a loved one who had died	0.00	0.28	0.00	0.21
	The job opportunities her parents had thanks to wider family support	0.32	0.00	0.00	0.21
	Unpleasant experience no longer occurred	0.00	0.28	0.00	0.21
Feelings	Feelings experienced when expressing gratitude	28.0	21.1	33.3	19.2
	Feelings experienced when receiving a benefit	72.0	79.0	66.7	80.8
Expressions1	Verbal	9.89	7.78	14.6	5.84
	Concrete	80.8	85.6	77.1	86.7
	Connective	4.40	2.59	4.86	2.60
	Finalistic	4.40	2.59	4.86	2.60
Efforts	Recognition of benefactor's hard work	50.0	40.0	57.1	44.4
	Benefactor showing understanding of beneficiary	25.0	20.0	14.3	22.2
	Time investment by benefactor	25.0	20.0	14.3	22.2
	Benefactor's use of financial resources	0.00	10.0	14.3	0.00
	Putting beneficiary's needs above benefactor's	0.00	10.0	0.00	11.1

1 For the Expressions element of gratitude codes are reported, since these were theoretically predefined categories as mentioned earlier.

This analysis yielded two results. Firstly, differences were found in the descriptions of the themes of the unanticipated element of effort between the contexts of girls and boys and private and public schools, due to the different types of effort identified. Secondly, across all 4 contexts (girls, boys, public education, and private education) the 5 elements of gratitude and 26 of the identified themes and subthemes were present. Specifically, in the analyzed material for the girls, 84.6% of the identified subthemes were present, while for the boys 96.2% were present. Grouped by type of educational institution, 96.2% of themes and subthemes were identified in public schools and 84.6% in private schools. In all contexts, a wide diversity of benefits identified by girls and boys was observed, along with an impressive variety in the people and beings recognized as benefactors. All forms of expressing gratitude (verbal, concrete, connective, and finalistic) were also present. Two elements of gratitude showed less variety of examples across contexts: emotions and efforts. As mentioned above, the only differences in the presence of extracts between cases were due to the types of effort mentioned and certain benefits that were only mentioned by a single child. As can be seen in Figure 2, the saturation distribution of each element of gratitude was remarkably similar in each context.
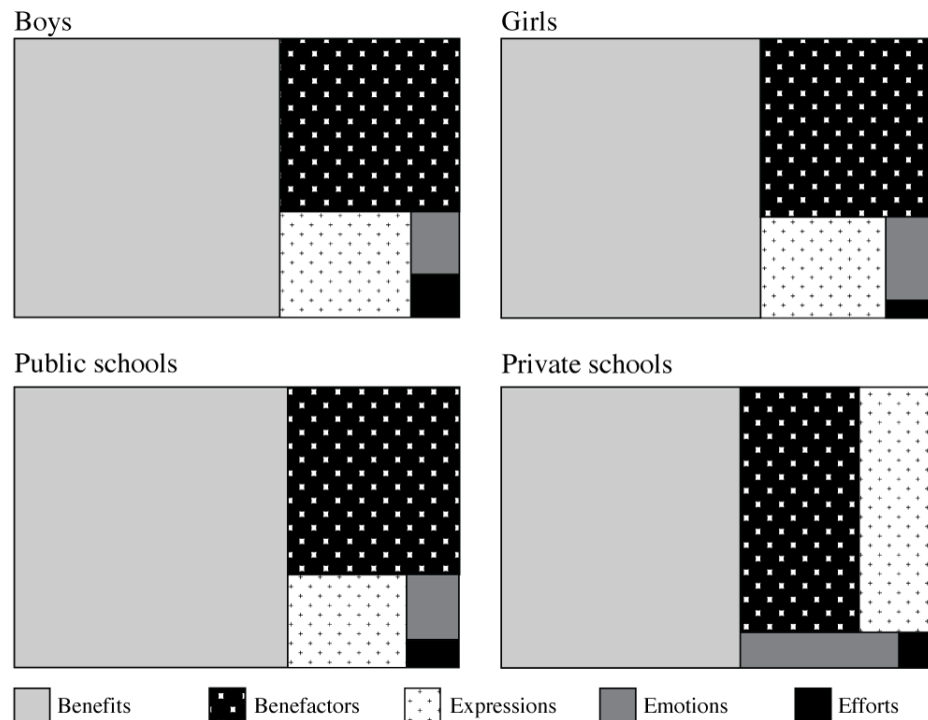
Figure 2
Saturation Distribution of Pre-established Gratitude Elements

Indeed, the elements and themes of gratitude were present in all groups (both girls and boys, from both public and private schools) in rather similar ways. Moreover, the differences between groups were small and, in our analysis, were connected more to particularities of children's lives than to general differences in gender or social class. For example, students from both public and private schools identified trips away from the city as a fun activity that made them feel grateful; the differences came in the types of places to which they travelled (to the coast by airplane, or to a nearby town by car

or bus). Both girls and boys identified the nuclear family as a principal source of benefits. The differences came in the people who were mentioned as family members, relating to differences in the structure of each family. For example, there were several participants who mentioned living with a female head of household, others mentioned the stepfathers as a source of benefits, and still others being raised by their grandparents or living with their uncles or aunts, all of which are quite common forms of family structures in Colombia (Escobar, 2019).

By way of synthesis, Figure 3 illustrates the connections between all these elements of gratitude, for the examples of nuclear family members and teachers.

Figure 3

Examples of Elements Identified in Girls' and Boys' Gratitude Experiences in Public and Private Schools
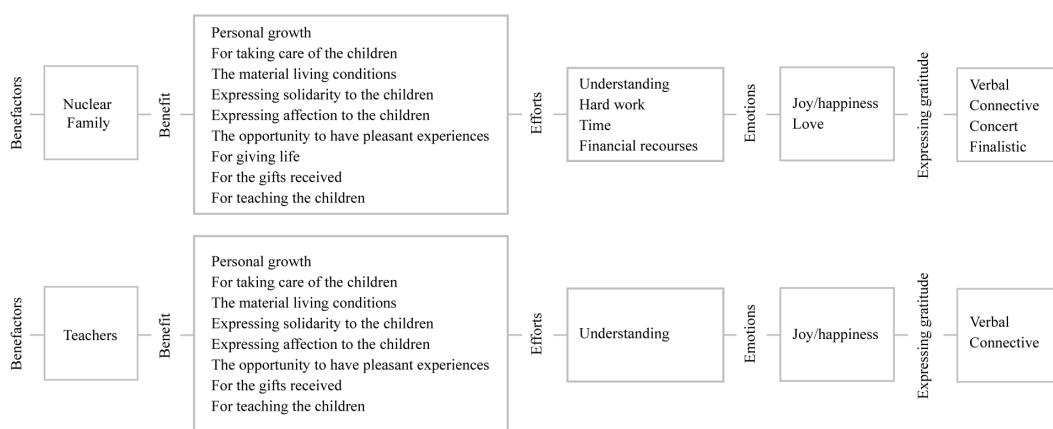
Discussion

This study used focus groups to explore to whom and for what benefits Colombian children were grateful, along with the feelings and behaviors they associated with gratitude. A striking level of commonality occurred across all the elements of gratitude (benefactors, benefits, feelings, expressions, and effort) between all the groups. This is encouraging in terms of the potential of this research to inform an educational intervention based on gratitude that could improve the experiences of diverse groups of children across Colombia. Some diversity remained in the verbal responses of the participants, particularly in the element of effort, which may have been influenced by the separation of both girls and boys, and public and private schools, in the composition of the focus groups. This makes the commonalities in children's responses even more remarkable, leading us to suspect that it may reflect certain characteristics

of the Colombian social and cultural environments to which the children belonged. At the same time, a few subtle differences in gender and school type (in terms of recognition of material benefits and benefactor's efforts, for example), as well as differences in the details of children's descriptions of what they were grateful for, remind us that these social characteristics play structuring roles in children's experiences of gratitude. A future publication focusing on the mixed-methods analysis of over 100 *Gratitude Books* will attempt to clarify these issues using more systematic comparisons of differences by gender and school type.

In discussing benefactors, children in all focus groups mentioned family members (especially mothers) first. This mirrors the results of a recent article reporting a study carried out with Colombian children, which used visual methods to help children construct "'gratitude schemas" of the categories of benefactors that mattered most to

them, and found that "'family" was always placed in the first rank of the schemas (Carrillo et al., 2022). The importance of the family is unsurprising given its centrality in Colombian society: it is the main source of protection and care, the basic structure in which children develop and grow, and a key context in which they learn behaviors and values—a context that changed greatly over the 20th century but has not diminished in importance (Escobar, 2019). Furthermore, as also found by Carrillo et al. (2022), the importance of family in children's discussions was not limited to members of the nuclear family, such as parents and siblings. They also frequently mentioned members of their extended or reconstituted families, including grandparents, aunts, uncles, cousins, and stepparents, all of whom can be important figures of socialization in the large family structures typical of Latin America (Escobar, 2019).

Although children generally thought of family members first, when asked for other examples of benefactors, they easily identified many other categories of people (friends, teachers, other school personnel, doctors, and other key workers) and even a few non-human categories (God, nature, institutions, and pets). The presence of pets was unexpected, but again converged with the results of the article on gratitude schemas discussed in the previous paragraph (Carrillo et al., 2022). This suggests that pets form an important source of companionship for many children, and that this could be a valuable topic for more focused research on the development of gratitude (and other social emotions) in the future. Additionally, the personification of abstract benefactors, such as God or nature, reflects the wide range of contexts in which preadolescents and young adolescents experience gratitude. This underscores that they experience gratitude in many aspects of their lives, which may help them to maintain different forms of social and even spiritual relationships. The presence of abstract benefactors also helps to support the theoretical conceptualization of gratitude as a character strength linked to the

virtue of transcendence (Peterson & Seligman, 2004; Steindl-Rast, 2004). As to whether feelings towards such abstract, transcendent benefactors count as gratitude or are more like appreciation (Watkins et al., 2003), we note that children were specifically asked about situations in which they felt "gratitude" to someone for a benefit received. That they did not limit their responses to strictly human benefactors is thus an interesting empirical finding, which can help broaden our understanding of gratitude experiences in this age group.

In terms of the benefits that children were grateful for, it should be noted that there was a wide variety of general benefits received from many different types of benefactors, and a slightly smaller set of benefits associated with particular benefactors. This demonstrates the flexibility and sophistication of pre-adolescent children's understanding of gratitude: they are already capable not only of expressing gratitude for material and mundane things like gifts (Bausert et al., 2018), but also for rather far-reaching reasons (Steindl-Rast, 2004), including natural beauty and life itself. Such far-reaching benefits tended to be associated with the transpersonal subthemes of God, nature, and social institutions (apart from giving life, which was also strongly linked to mothers). On the other hand, children did not always articulate explicitly why they were grateful for many benefits, whether material or immaterial. Some of them, especially those from poorer backgrounds, did identify the amount of effort that their parents and other benefactors had to make to provide them with benefits. However, this was not universal, suggesting that awareness of benefactors' efforts could be a good target for educational intervention. Future research could attempt to probe more explicitly children's understanding of the effort behind the benefits they receive.

In contrast to the variety of benefactors and benefits mentioned, children did not identify a wide range of feelings associated with gratitude experiences. Almost all children focused on positive emotions such as happiness, joy, and (to a

lesser extent) love. The emphasis on happiness is congruent with the thematic analysis of conversations about gratitude between parents and children recently carried out by Midgette et al. (2022), who found that parents thought being happy was both a sign of gratitude and the goal of their behavior as benefactors towards their children. There are two ways of looking at the lack of diversity in feelings cited and the preponderance of positive emotions such as happiness. On the one hand, these findings support the idea that gratitude is a positive force in the life of children, whose promotion can help improve their wellbeing and sense of achievement due to its association with positive emotions (Magno & Orillosa, 2012). Another possibility is that in the focus groups we did not probe sufficiently for children to reveal the full range of emotions (both positive and negative) that they associated with gratitude, which could have allowed them to connect gratitude more explicitly with less obvious but still relevant feelings, such as relief or hope. Gratitude-related interventions might encourage children to think about concrete situations in which they can (or should) feel gratitude, and how certain negative feelings—such as resentment or obligation—can also be triggered in such situations, since it is important to distinguish such feelings from the emotion of gratitude in adults (Gulliford & Morgan, 2017; Shin et al., 2020).

Although our results encompassed all the distinct types of expression of gratitude identified in our literature review, there were fewer references to more complex ways of expressing gratitude. Developing actions that expand and promote connective and finalistic expressions of gratitude could be another target for educational interventions, enabling children to raise the quality of interactions they have when they are grateful. In this way, it is possible that children can enjoy more of the positive personal and social effects that have been identified in the literature as products of the expression of gratitude to others (Bono et al., 2019; Froh et al., 2011; Furlong et al., 2013).

One important limitation of our study—that urges caution in the interpretation of the small differences between groups—is the different dynamics of the conversations that took place, even though the same question script was used. Our data collection methodology relied on focus groups, designed for children to discuss gratitude collaboratively with peers and researchers. As such, it may have neglected individual differences in young people's experiences of gratitude (Reckart et al., 2017), while also lacking power and controlled manipulations to uncover systematic differences. Regarding the lack of diversity of the feelings that were mentioned by participants in connection with gratitude, our lack of prompting for specific situations in which complex feelings can be triggered may have led us to under-describe the emotional diversity associated with gratitude by the children in our study. Nevertheless, we consider that the linking of feelings to particular benefactors, benefits, and expressions of gratitude in our rich dataset represents a contribution to the literature in terms of helping to create a model of gratitude development that reflects the rich social and emotional worlds inhabited by Colombian children. Future work could expand on the current research by analyzing dyadic conversations on gratitude between Latin American children and their benefactors (such as parents or teachers) along the lines of Midgette et al. (2022) for American children and parents, to tease out commonalities and differences in these groups' understanding of the elements of gratitude—especially, perhaps, effort—identified by the present study.

Conclusion

This study examined Colombian pre-adolescents' identification of the components of gratitude: the benefactors to whom and benefits for which they were grateful. Additionally, it examined the emotions they associated with gratitude and the ways in which they expressed and acknowledged it in others. Although family was identified by the participants as the main group of benefactors, and

accompaniment and support were highlighted among the benefits, a great diversity of benefactors and benefits was found in the participants' experiences. Compared to this diversity, the results showed less richness in the range of emotions and expressions that were mentioned in children's discussions and gratitude books. Both expressions and emotions could be valuable targets of educational interventions to increase children's awareness of how gratitude relates to practical actions and affective states. Such interventions could be useful to implement for different target populations in various contexts, since we found striking similarities in understandings of gratitude between boys and girls and between public and private schools. Finally, an unexpected result was that participants talked spontaneously about the efforts made by benefactors to deliver them benefits. In future research, it may be worth exploring the relationship between gratitude and effort more directly, both in studies of the development of gratitude in children and in educational programs that deepen their understanding of these concepts. We have shown that the use of visual methods, such as our *Gratitude Books*, can be a powerful tool for stimulating discussions around social emotions such as gratitude in children's focus groups, creating rich datasets that give us a window into children's worlds. This can be particularly helpful when working with an understudied group such as Colombian children. We also contributed to the literature on this group by showing how many of the children's gratitude experiences were rooted in important aspects of Colombian culture.

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Validation of the Hispanic American Version of the Plymouth Sensory Imagery Questionnaire (psi-q): A Culturally Adapted Measure of Multisensory Mental Imagery

Running Head: Validation of the Hispanic American PSI-Q

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SCIENTIFIC RESEARCH ARTICLE

Abstract

Mental imagery is increasingly recognized to play a key role in psychotherapy, education, and other domains. The Plymouth Sensory Imagery Questionnaire (psi-q) measures the vividness of mental imagery in seven modalities: vision, sound, smell, taste, touch, bodily sensations, and feelings. This study adapted the psi-q for Hispanic-American respondents in Colombia and explored moderators of imagery vividness. Study 1 validated the original psi-q (short version) in a sample of 292 Colombian university students. Study 2 developed and validated a cultural adaptation of the psi-q with 508 Colombian adults from the general population. The Vividness of Visual Imagery Questionnaire-2 (vviq-2) was used to analyze convergent validity in both samples. Thus we propose a new 29-item Hispanic-American version of the psi-q, adapted to cultural differences in the region, that displays good reliability and convergent validity. Imagery vividness was higher in females and at higher education levels. Higher cross-loadings between senses occurred in this sample, which may reflect cultural differences in somatization.

Keywords: Assessment, Hispanic, Latin America, mental imagery.

Validación de la Versión Hispanoamericana del Cuestionario de Imaginería Sensorial de Plymouth (psi-q): Una Medida Culturalmente Adaptada de la Imaginería Mental Multisensorial

Resumen

Se reconoce cada vez más que las imágenes mentales tienen un papel clave en la psicoterapia, la educación y otros dominios. El Cuestionario de Imágenes Sensoriales de Plymouth (psi-q) mide la viveza de la imaginería mental en siete modalidades sensoriales: visión, sonido, olfato, gusto, tacto, sensaciones corporales y sentimientos. El presente estudio adaptó el psi-q para hispanoamericanos en Colombia y exploró moderadores de percepción de las imágenes. El estudio 1 validó el psi-q original (la versión corta) en una muestra de 292 estudiantes universitarios colombianos. El estudio 2 desarrolló y validó una adaptación cultural del psi-q con 508 adultos colombianos de la población general. Se utilizó el Cuestionario de Vividness of Visual Imagery-2 (vviq-2) para analizar la validez convergente en ambas muestras. Proponemos una nueva versión hispanoamericana de 29 ítems del psi-q, que se adapta a las diferencias culturales de esta región y muestra buena confiabilidad y validez convergente. La viveza de las imágenes fue mayor en las mujeres y en los niveles educativos más altos. Se observaron cargas cruzadas altas entre los sentidos, lo que puede reflejar diferencias culturales en la somatización.

Palabras clave: América Latina, evaluación, hispánico, imágenes mentales.

Mental imagery subjectively resembles the experience of perceiving a stimulus, but it occurs in the absence of the corresponding external stimulus (Reisberg et al., 2003; Pearson et al., 2015). Although the Visual modality has been the focus of most empirical studies on imagery, mental imagery can occur in any of the sensory modalities. Images can be involuntary or deliberately generated and may involve memories or imagined hypothetical scenarios.

Mental images can be measured according to their vividness: how closely they resemble real perceptual experience. Vividness is influenced by the availability of cognitive processes, e.g., concurrent cognitive load in the so-called visuospatial sketchpad of working memory (Baddeley & Andrade, 2000). It is also shaped by individual differences (e.g., in executive functions and possibly the perceptual cortices) and by the qualities of the stimuli being imagined, including their complexity (Bywaters et al., 2004). The importance of measuring imagery vividness is supported by multiple studies that have shown that vivid mental images powerfully impact our emotions and, when negative, can be associated with psychopathology (Holmes et al., 2008; Holmes & Mathews, 2010). Vivid imagery is associated with desire and motivation (Kavanagh et al., 2005), motor performance (Callow et al., 2006), and problem-solving success (Kozhevnikov et al., 2007). However, most measures of mental imagery vividness only assess the Visual modality (Marks, 1995).

Andrade et al. (2014) developed the Plymouth Sensory Imagery Questionnaire (PSI-Q), a self-report scale that measures the vividness of mental imagery in seven modalities: Vision, Sound, Smell, Taste, Touch, Bodily Sensation, and Emotional Feeling. The original paper presents an extended 35-item PSI-Q (5 items per subscale), as well as a shorter 21-item version (3 items per subscale). The PSI-Q differs from most previous imagery scales by measuring multiple sensory modalities simultaneously. It enables a comparison of relative strengths and weaknesses across modalities at a group and individual level and helps to identify the modality-general and modality-specific contributions to imagery

(McNorgan, 2012). Studies have used the PSI-Q to demonstrate a relationship between sensory imagery and sensory sensitivity (Dance et al., 2021) and how imagery in different modalities changes through development (Arshamian et al., 2020).

The PSI-Q has recently been validated in Spain (Pérez-Fabello & Campos, 2020) and Germany (Jungmann et al., 2022). Both studies found support for the 7-factor model and good psychometric properties using the original set of items. However, to date it has only been validated in high-income countries, despite the fact that only 16% of the world's population lives in such regions (Prydz & Wadhwa, 2019). Consequently, this has an impact on the breadth of research that can be done on mental imagery and its potential role in shaping human motivation, emotion, and learning. Therefore, the present study aims to adapt and validate the PSI-Q for Hispanic America, the Spanish-speaking nations of the Americas. These countries share a common language and many cultural similarities, so instruments can often be used across the region. Comprising predominantly of middle-income countries, the region contains 433 million people, representing 5.7% of the world population (World Bank, 2019). Thus, this is an important region in which to support research and informed clinical practice that is more representative of human functioning globally.

In study 1, the psychometric properties of a simple (non-adapted) translation of the PSI-Q short version were explored in a sample of 292 private university students in Colombia. The short version was chosen for its excellent psychometric properties in English and because of its wide use by researchers due to convenience. Convergent validity was analyzed using the Vividness of Visual Imagery Questionnaire-2 (VVIQ-2), the most widely used instrument of mental imagery vividness, and test-retest reliability was also calculated. In study 2, the long version of the PSI-Q was culturally adapted for Hispanic America (by adjusting item wording, instructions, and response scale anchors, and replacing some items), and then applied in a

community adult sample of 508. Convergent validity using the VVIQ was again calculated.

Study 1

Materials and Methods

Participants

Participants were 292 Colombian undergraduate psychology students from a private university in Bogotá (210 female, 71.9%). Age ranged from 18 to 34 years (M = 20.3). Sample size is consistent with guidelines recommending an approximate sample size of $N = 300$ for a factor analysis (Field, 2005; Tabachnick & Fidell, 2012).

Measures

Plymouth Sensory Imagery Questionnaire (PSI-Q). For this study, the short version of the test was used following direct translation into Spanish (see Procedure).

Vividness of Visual Imagery Questionnaire-2 (VVIQ-2; Marks, 1995). The VVIQ-2 consists of four sets of four items. Each set asks respondents to imagine a particular visual scene with their eyes open and then answer four questions about the vividness of elements of their image on a scale from 1 (no image at all, you only "know" that you are thinking of an object) to 5 (perfectly clear and as vivid as normal vision). For example, one set of items asks participants to "visualize the rising sun" and then report the vividness of four elements, including "the sun is rising above the horizon into a hazy sky" and "a rainbow appears". The present study used the validated Spanish version (Soledad Beato et al., 2006).

Procedure

Ethical consent was obtained from the ethics committee in the university at which this study was conducted. Following established guidelines (Sousa & Rojjanasrirat, 2010), a translation of the PSI-Q from English to Spanish was prepared by two bilingual and bicultural individuals whose mother tongue is Spanish (the second author and a postgraduate student). The two versions were compared by another student and discrepancies were resolved as a team. Back translation was then carried out by the first author, whose first language is English, and ambiguities were revised and resolved by the team. At this stage, items were not adapted or added because (i) we wanted to explore the properties of the original PSI-Q, and (ii) all items were deemed familiar and comprehensible to a private-university student population, who have been exposed to international cuisine, activities, etc. Recruitment took place in psychology lectures. All data was collected via pen-and-paper. In the initial session, all participants completed a consent form and the PSI-Q (short version), and a subgroup of N = 160 completed the VVIQ for convergent validity. Participants were given a snack to thank them for participating.

Six weeks later, the PSI-Q (short version) was reapplied to 65 participants (two classes, selected randomly) to measure test-retest reliability. Age (M = 19.94, SD = 2.86) and gender (49 females, 75.4%) were similar to that of the original sample. The data is available through open-access repository [https://osf.io/qrb6j/].

Data analysis

Analysis was conducted using RStudio version 1.1456 (RStudio Team, 2016) with the Lavaan library (Rosseel, 2012). First, we ran a confirmatory factor analysis and checked goodness-of-fit indices and factor loadings to examine whether the factor structure replicated that of the English version. We then proceeded to adjust this model to improve the overall fit. Notice that for the confirmatory factor analysis we have used one of the robust maximum likelihood estimators (MLF) which allowed us to run the analysis with incomplete data.

Results

Items showed mostly positive asymmetric distributions, with neither floor nor ceiling effects. Means and standard deviations (in brackets) for

each subscale are as follows: Visual = 7.92 (1.51), Auditory = 8.01 (1.91), Olfactory = 5.51 (2.53), Taste = 6.57 (2.34), Tactile = 7.51 (1.99), Bodily Sensations = 7.16 (2.02), and Emotion = 7.80 (1.85).

Internal consistency

Internal consistency was excellent for the PSI-Q total (α = .90, ω = .91) and acceptable to good for Visual (α = .78, ω = .79), Auditory (α =. 60, ω = .62), Olfactory (α = .75, ω = .77), Taste, (α = .73, ω = .75), Tactile (α = .71, ω = .72), Bodily Sensations (α=.68, ω = .68), and Emotion scales (α = .70, ω = .71). Mean correlation between the scales was of 0.53, ranging from 0.32 ($p < 0.01$) for the correlation between Taste and Vision to 0.6 ($p <$ 0.01), for the correlation between Taste and Smell.

Convergent validity with the VVIQ

The VVIQ scale exhibited a good reliability (α =. 85, ω = .88). Moderate convergent validity was seen between the VVIQ and the original PSI-Q full scale (r = 0.53). All PSI-Q subscale scores were positively associated with the VVIQ, with the Visual and Bodily Sensations subscales having the highest and lowest correlations (r = .67 and r = .31), respectively.

Test re-test reliability

Eight-week test-retest reliability, measured with 65 participants, indicated a significant correlation (r = .65), with no significant differences between the means of both applications ($Mpre$ = 256.78, SD = 26.3, $Mpost$ = 251.98, SD = 26.3), paired t-test: $t(64) = 0.73$, $p = .46$, $Mdiff$ = 4.8, 95% CI [-8.4, 18.01]).

Confirmatory factor analysis of short version

A confirmatory factor analysis offered adequate support for the original model of seven distinct scales. Although the model fit is acceptable for a replication, it was further improved by removing two items with potentially high cross-loadings, "burnt wood" (Smell) and "walking briskly in the cold" (Bodily Sensation), and allowing for residual covariances that include the Smell scale items (See Table 1 for a summary). This may reflect that experiences of wood-burning and cold weather are uncommon in Colombia. The residual covariances with Smell scale items stemmed from high cross-loadings between Smell and other subscales, particularly Taste, resembling findings of the original PSI-Q validation study (Andrade et al., 2014).

The best-fitting model performs better in every single indicator assessed, with better standard fit indices, like the CFI (0.94) and TLI (0.92), and a good RMSEA (0.050). Full factor loadings for the best model are presented in Electronic Supplementary Material 1.

Table 1

Contrast of Goodness-of-fit Measures for Structural Equation Modelling (SEM) Models for the PSI-Q (N =292)

	Original model	Best model
Number of parameters	63	59
χ^2	384.34 (168), p < 0.001	218.52 (127), p < 0.001
CFI	0.896	0.9475
TLI	0.870	0.928
Log likelihood	-13115.55	-11807.89
AIC	26357.09	23704.29
BIC	26587.64	23953.84
RMSEA	0.067	0.050
CI Lower	0.058	0.037
CI Upper	0.076	0.061
P value	0.001	0.090
GFI	0.882	0.923

Note. The GFI refers to the goodness-of-fit index (Sharma et al., 2005) and it is analogous to $R2$ in the context of linear regression.

Study 2

Material and Methods

Participants

Ethical consent for the second study was obtained from the institutional IRB at Universidad de los Andes (ref #14638). Participants in the second study comprise low-income adults based in Bogotá who had signed up for an entrepreneurship training program that incorporated aspects of mental imagery. All participants completed a consent form. The data is available through open-access repository [https://osf.io/qrb6j/].

The present study used data collected at baseline on two occasions. First, in April 2019, 43 participants (22 male, 21 female) between 19 and 62 years old (M = 40.56, SD = 13.68) were recruited for a pilot phase of the entrepreneurship training program. Second, in June 2019, 508 adults (261 women, 259 men) were recruited for the main phase of the same project. These participants represent a relatively varied sample of the urban Colombian population. The majority (62.3%) were aged 18-28 years, with 31.8% aged 29-59 and 5.9% aged 60+. In terms of education level, 187 (36.8%) had at least an undergraduate university degree, 172 (33.8%) had a technical (non-university) qualification, 91 (18.1%) had completed high-school, and 58 (11.4%) had not completed high-school. It is worth mentioning that the entrepreneurship program prioritized recruitment of vulnerable individuals, such as victims of the Colombian armed conflict, migrants, and low-income households. However, PSI-Q subscale means in the present study were very similar to those found in the original PSI-Q validation (Andrade et al., 2014), suggesting that participants did not suppress imagery when completing the PSI-Q.

Measures

Plymouth Sensory Imagery Questionnaire (PSI-Q).

A direct translation of the original 35-item instrument was applied in the pilot phase (as in Study 1), but some participants identified that several items were difficult to understand. Consequently, the scale was adapted for context, with four of the items removed and replaced with five new items, and one further item reworded (see Procedure). The full translated version is provided at the end of this article.

Vividness of Visual Imagery Questionnaire-2 (VVIQ-2; Marks, 1995).
See Study 1 for details.

Procedure

The team who adapted the PSI-Q consisted of bilingual Colombian and British researchers living in Colombia, experienced in implementing interventions with participants from across the spectrum of socio-economic status.

In the pilot, participants completed the validated Spanish version of the PSI-Q, as in Study 1. Items were administered verbally via one-on-one interviews by trained research assistants to enable evaluation of participants' comprehension item-by-item. Research assistants read instructions and items aloud, and visually presented the response scale each time (see final version at the end of this article). The research assistants identified any items that had been difficult for participants to understand.

A new version of the PSI-Q adapted for a Hispanic American context was then developed based upon the insights of the pilot (see results) and applied in the second phase. Data collection used the same approach as the pilot (one-on-one verbal administration) to ensure that low literacy did not affect validity. Researchers supervising data collection ran programmed quality checks daily to correct for duplicates and identify any deviations from the protocols. They were also in regular contact with field staff to clarify possible misunderstandings and conducted random spot checks to ensure that surveys were being conducted according to protocols.

Data analysis

As in Study 1, analysis was conducted using RStudio version 1.1456 (RStudio Team, 2016) and confirmatory factor analyses ran with the Lavaan library (Rosseel, 2012) with an ML estimator. We fitted several models to contrast the original, shortened, and modified versions of the PSI-Q, and explored some moderators of imagery vividness.

Results

Results from pilot study and subsequent adaptation

Mean vividness scores indicated satisfactory ability to imagine (≥ 7 of 10) for most items, except for a "stuffy room" (Smell) with mean vividness of 6.6. As in Study 1, items showed a positive asymmetrical distribution that suggests the task was relatively easy for the participants.

Through group discussions and analysis of pilot data, several of the PSI-Q items were hypothesized to have low face validity for a representative sample of Hispanic American population. Specifically, these were: "mustard" and "black pepper" (Taste), since these condiments are not commonly used in Hispanic American cuisine; "relaxing in a warm bath" (Bodily Sensation), since baths are rarely found outside upper-class homes; and "walking briskly in the cold" (Bodily Sensation), since most countries in Hispanic America have a warm or temperate climate year round. These four items were therefore removed and replaced with more contextually relevant items.

The item "newly cut grass" (Smell) was reworded to "damp grass". In Hispanic America, grass tends to be found in communal parks or areas, but not in private gardens, and thus people rarely cut grass.

An alternative item pool for the subscales Taste, Smell and Bodily Sensations was developed and refined through group discussions among the research team. We retained only those items deemed most comprehensible and familiar to participants across Hispanic America from all socio-economic backgrounds. The new items included for testing were: "car exhaust fumes" (Smell); "mint leaves" (Taste); "orange juice" (Taste); "sitting on a hard wooden chair" (Bodily Sensation); and "your leg falling asleep" (Bodily Sensation).

The scale instructions were lengthened in detail to ensure that respondents understood what was being asked of them. Additionally, the response scale was edited to assist comprehension by (i) shading the scale in darkening shades of grey from left to right, and (ii) using additional word anchors to clarify the meaning of the scale values (see the final version at the end of this article for instructions and response scale).

Descriptive statistics of adapted PSI-Q

Table 2 presents means and standard deviations for the individual items, scale and subscale totals for the full sample of N = 508 who completed the adapted 36-item scale. The items with comparatively low vividness (M < 7) were: "a stuffy room" (Smell), "burnt wood" (Smell), "warm sand" (Touch), and "scared" (Feeling).

Table 2

Descriptive Statistics for the Adapted Version of the PSI-Q (N=508)

Dimension	M	SD
Imagine the appearance of:	8.34	2.18
A friend you know well	8.3	2.2
A cat climbing a tree	8.2	2.3
A sunset	8.7	1.9
The door in front of your house	9.0	1.8
A fire	7.5	2.7

Dimension	M	SD
Imagine the sound of:	8.4	2.18
An ambulance siren	8.0	2.4
Hands clapping in applause	8.5	2.0
The mewing of a cat	8.4	2.3
The sound of a car horn	8.5	2.2
The sound of children playing	8.6	2.0
Imagine the smell of:	7.32	2.8
A stuffy room	6.8	3.1
A rose	7.4	2.8
Fresh paint	8.2	2.4
Damp grass	7.4	2.7
Car exhaust fumes	7.3	2.9
Burnt wood	6.8	2.9
Imagine the taste of:	8.12	2.28
Mint	7.2	3
Toothpaste	8.7	1.8
Lemon	8.7	1.9
Salty water	7.4	2.8
Orange juice	8.6	1.9
Imagine touching:	7.76	2.52
Warm sand	6.4	3.1
A soft towel	7.9	2.3
The point of a pin	7.5	2.9
Icy water	8.5	2.0
Fur	8.5	2.3
Imagine the bodily sensation of:	7.76	2.54
Sitting down on a hard wooden chair	7.8	2.5
Sore throat	7.6	2.6
Threading a needle	7.5	2.7
Jumping in a pool	7.7	2.6
Having your leg fall asleep	8.2	2.3
Imagine feeling:	8.04	2.3
Excited	9.0	1.6
Relieved	8.8	1.8
Furious	7.5	2.7
In love	8.1	2.5
Scared	6.8	2.8

Values for Cohen's alpha and McDonald's omega, classic measures of internal reliability, reveal acceptable to good internal consistency, assuming unidimensionality, for all subscales of the PSI-Q (see Table 3). Consistency did not improve with the removal of any item, with the exception of "jumping into a pool", which marginally improved reliability of Bodily Sensations to $\alpha = 0.75$, $\omega = 0.76$. Correlations between the subscales are moderate except for the Emotion subscale, which has the lowest correlations with the other dimensions (See Table 3).

Table 3
Reliability Measures for Subscales of the PSI-Q for Study 2 and Correlations Between Subscales (N=508)

PSI-QSubscale	mean	SD	alpha	omega	Visual	Auditory	Olfactory	Taste	Tactile	Bodily S.
Visual	8.34	2.18	0.82	0.83	--	--	--	--	--	--
Auditory	8.40	2.18	0.74	0.75	0.62	--	--	--	--	--
Olfactory	7.32	2.80	0.75	0.76	0.52	0.60	--	--	--	--
Taste	8.12	2.28	0.69	0.72	0.44	0.53	0.66	--	--	--
Tactile	7.76	2.52	0.76	0.79	0.49	0.56	0.63	0.64	--	--
Bodily sensations	7.76	2.54	0.72	0.73	0.43	0.54	0.60	0.54	0.64	--
Emotion	8.04	2.30	0.83	0.84	0.40	0.47	0.43	0.47	0.48	0.54

Note: All correlations are significant at p < 0.01.

The VVIQ-2 scale exhibited a good reliability (α =. 87, ω = 0.90). As before, moderate convergent validity was seen between the VVIQ-2 and the PSI-Q full scale (r=0.57). All PSI-Q subscale scores were positively associated with the VVIQ-2, with the Taste and Feeling subscales having the highest (r = .52) and lowest correlations (r = .39) respectively.

Confirmatory factor analysis

An initial confirmatory factor analysis showed an acceptable fit for replication, with an RMSEA of 0.07 and a SRMR of 0.067 (See Table 3). The model fit, however, improves significantly with various modifications, as outlined below.

Modification indices suggested fitting a model including residual covariances between items in the Feelings scale and between the items "car fumes" and "burnt wood". This model, also presented in Table 3 (third column), is the best fitting model without allowing item cross-loading. However, this model still does not exhibit a good fit, with CFI and TLI indices under .90 and an RMSEA confidence interval that does not include 0.05.

The modification indices of the model fitted to the original structure suggest several cross-loadings, particularly of Feeling items ("furious", "excited", "scared") onto the Touch and Bodily Sensations scales. While allowing for cross-loadings improves the fit of the simple structure imposed by the analysis, it limits the interpretation of the relevant scores as measures of the constructs at hand. Alternatively, shortening the scale can help to reduce the error variance (Eriksson & Boman, 2018) while maintaining the integrity of the subscales' scores. We fitted a model with a reduced number of items, by deleting those with factor loadings < .35; specifically, from the subscales Touch (items "fur" and "soft towel"), Bodily Sensations ("jumping in a pool"), Smell ("rose"), Taste ("salty water") and Feelings ("furious" and "scared").

The indices for both the model with cross-loadings and the shortened 29-item version are presented in Table 3 (fourth and fifth column). Both models' indices show an improvement relative to the original model and to the best-fitting model without cross-loadings, with the shortened model having the best fit (see Electronic Supplementary Material 2 for factor loadings for this model).

As a result, the version of the PSI-Q that best captures the underlying imaginal dimensions in a Hispanic American context is the Shortened Version, which exhibits the best overall fit (See Table 4), acceptable loading for all items included (See Electronic Supplementary material 2), and includes at least 3 items per dimension (included at the end

of this article). The main difference with the original version lies in the measurement of the Feelings and Touch dimensions, whose items did not seem to uniquely capture the dimension intended.

Table 4

Contrast of Goodness-of-fit Measures for SEM Models for the PSI-Q (N = 508)

	Original model	Best model without cross-loadings	Best model with cross-loadings	Shortened version model
Number of parameters	94	96	106	81
χ^2	1833.71(572), p < 0.001	1517.56(534), p < 0.001	7278.68(630), p < 0.01	836.03(354), p < 0.01
CFI	0.810	0.849	0.861	0.910
TLI	0.791	0.832	0.844	0.895
Log likelihood	-34577.14	-33566.20	-34401.1	-28078.09
AIC	69342.82	67324.49	69014.21	56318.20
BIC	69729.30	67719.62	69450.03	56653.35
RMSEA	0.070	0.063	0.603	0.054
CI Lower	0.066	0.060	0.056	0.049
CI Upper	0.074	0.067	0.064	0.059
P value	< .001	< .001	< .001	0.07
GFI	0.79	0.822	0.829	0.890
SRMR	0.067	0.071	0.055	0.049

Moderators of imagery vividness

To determine if there were significant moderators of imagery vividness, we fitted a linear model with age, gender (after eliminating non-responders), and educational level as predictors of the scores in all items. The model (R^2 = 0.014. $F_{(7, 3527)}$ = 8.35, p < 0.0001) revealed differences between men and women and an interaction between gender and education. Women scored slightly higher than men in overall scores, particularly in the Feelings (MMen = 7.90, MWomen = 8.16, Welch t (496) = -1.83, p = 0.06) and Taste subscales (MMen = 7.86, MWomen = 8.40, Welch t (483) = -3.66, p < 0.001). The interaction between gender and education revealed that the link between visualization and education is stronger for men than for women (t (3541) = -2.13, p = 0.021); in men (but not women) higher formal education is associated with stronger imagery vividness. No other terms or predictors were significant.

General Discussion

The objective of this study was to investigate the psychometric properties of a translated version of the PSI-Q in Colombia and design a final version that could be used across a more varied sample in Hispanic America.

Study 1 indicated that in a highly educated student population, most items of the short version may be appropriate, with the exception of the items "burnt wood" (Smell) and "walking briskly in the cold" (Bodily Sensation). Subscale means and internal consistencies were largely comparable to the original English version. Test-retest reliability was similar to that found for the original English version (.65 versus .71). Thus, when working with highly educated populations such as university students, it may be appropriate to make only minor adaptations to the original PSI-Q.

Study 2 involved a more socioeconomically varied and thus more representative sample of Hispanic Americans recruited from vulnerable groups in particular. Analysis suggested that in order to obtain valid data, a cultural adaptation of the PSI-Q would be appropriate (involving adding or replacing items, rather than a simple direct translation).

Following a trial validation with a 36-item scale, it was concluded that seven items should be dropped to ensure good fit of a 7-factor model. We propose that future imagery research in Hispanic America use the new 29-item Hispanic American PSI-Q. This contains ≥ 3 items per subscale and has good internal consistency.

The removal of 7 items was largely due to cross-loadings of Feeling items, particularly "furious" and "scared", onto the Touch and Bodily Sensations subscales from the full scale. These cross-loadings may reflect cultural differences in subjective experience of emotions: previous literature has identified greater somatization of emotional distress in Hispanic Americans compared to non-Hispanic Americans and Europeans (Dunlop et al., 2019; Gureje et al., 1997; Tófoli et al., 2011), which may reflect cultural and linguistic norms for emotional expression. Thus, we hypothesize that Latin American individuals with non-vivid Touch and Bodily Sensation imagery may also rate their imagery of emotions as non-vivid. Future analysis using item differential response techniques on samples from different cultures could enable further exploration of this hypothesis, in conjunction with qualitative discussions with people who have lived experience to reflect on this.

Imagery vividness was moderated by gender, with women reporting more vivid imagery for Tastes and Feelings. The latter may reflect socialization of gender-related display rules for emotion expression, as many cultures socialize men to inhibit most emotions (Chaplin & Aldao, 2013), and Colombia is no exception (Velandia-Morales & Rincón, 2013). Furthermore, vividness was reported as higher in more highly educated men compared to lower-educated men. No result was seen in women, which might reflect gender differences in careers and technical specialization.

Limitations

Although the scale was adapted with a consideration for the language and culture of all Hispanic American countries, it was only validated in Colombian respondents, albeit across wide ranging education and income levels. Thus, future studies should validate it in other countries. The present study used the VVIQ for covalidation, following the original PSI-Q validation, but future studies might also validate with other measures such as the Spontaneous Use of Imagery Scale (SUIS) (Reisberg, Pearson, & Kosslyn, 2003). The item "car exhaust" performed effectively but may be less relevant in future as fossil fuels are eliminated.

Study 2 involved verbal administration of items due to limited literacy in some participants. Whilst this enabled us to validate the questionnaire in a population often excluded from research and we attempted to mitigate participant demand effects through our instructions, it is nonetheless possible that this could create demand effects. On the other hand, some researchers have found increased consistency in responses to verbally delivered questions, perhaps because this leads to greater reflection prior to responding (Perry et al., 2002). Verbal administration (compared to written) might place different cognitive demands on participants, although experimental studies comparing this are lacking (Bowling, 2005).

Conclusions

Mental imagery has assumed increasing importance in psychological therapies, educational programs, entrepreneurship and other domains. The present study proposes a cultural adaptation of the PSI-Q for Hispanic American regions. Reliability and validity were found to be satisfactory in a representative sample of Colombian adults. It is hoped that the adapted 29-item scale will encourage multisensory imagery research across a broader range of geographical regions, cultures, and education levels.

Hispanic American version of the Plymouth Sensory Imagery Questionnaire

Note: This version of the scale includes all 36 items applied to the full sample of Study 2. The Shortened Version, which we recommend based on our findings, involves dropping the seven asterisked items.

Cuestionario 'Plymouth' de Visualización Sensorial – Versión hispanoamericana

Intente imaginarse los temas descritos a continuación y califique de 0 a 10 qué tan claros y reales se los imaginó. Siendo 0 (no hay imagen en absoluto) y 10 (la imagen es clara y vívida como en la vida real). Use la escala para guiarle. Responda tan pronto como pueda, no piense mucho en esto, tome approximadamente 5 segundos por ítem.

Con "imaginar", nos referimos a crear imágenes mentales de escenarios en su cabeza con los 5 sentidos, por ejemplo, lo que puede ver, incluso con los ojos cerrados, o cuando oimos una canción en nuestra mente aunque no está sonando. No pase mucho tiempo en cada una, solo conteste con su reacción inmediata.

Electronic Supplementary Material

Factor loadings estimated for the best fitting model in Study 1 (file name = Electronic Supplementary Material 1)

Factor loadings estimated for the best fitting model in Study 2 (Shortened version) (file name = Electronic Supplementary Material 2)

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Social Representations of Gender: A Contextual Construction in Schools

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Abstract

Social representations of gender (SR), namely, beliefs, values, attitudes, and symbolic content about gender affect people's behavior and relations to others in social life. Gender representations help explain gender violence among the adolescent population. A qualitative study was conducted to explore the gender SR of teachers and students from two cities in Colombia: Bogotá and Ibagué. Multimethod data collection was performed using a word-association task with 37 teachers and a collaborative cartoon construction task with 284 students from both cities. Thematic analysis and triangulation were performed on this data. Knowledge and informational sources were explored in-depth among students and teachers. The analysis of gender representations revealed rather traditional views: binary representations of gender roles, gender relations, physical characteristics, and behavioral expectations for men and women. The study also found differences between the two educational contexts, scarce references to sexual diversity, and a nuance of tragedy in female gender roles and relations.

Keywords: gender representations, gender violence, peacebuilding at schools, social representations, thematic analysis.

Representaciones Sociales de Género: Una Construcción Contextual en la Escuela

Resumen

Las Representaciones Sociales (RS) del género: creencias, valores, actitudes y contenido simbólico, afectan comportamiento y relaciones de las personas en la vida social. Las representaciones de género ayudan a explicar la violencia de género en los adolescentes. Este estudio cualitativo exploró las RS de género de docentes y estudiantes de ciudades de Colombia: Bogotá e Ibagué. Mediante una recolección de datos multimétodo, 37 profesores realizaron una tarea de asociación de palabras y 284 estudiantes una tarea colaborativa de construcción de comics en ambas ciudades. Se realizaron análisis temático y de triangulación. Conocimiento y fuentes de información fueron explorados en profundidad entre los participantes. Emergieron puntos de vista tradicionales: representaciones binarias de los roles y las relaciones de género, características físicas, expectativas de comportamiento para hombres y mujeres, con diferencias entre ambos contextos educativos. Hubo escasas referencias a la diversidad sexual. Roles y relaciones de género matizados de tragedia para el género femenino.

Palabras clave: análisis temático, construcción de paz en las escuelas, representaciones de género, representaciones sociales, violencia de género.

Social representations (SR) are social products. They originate in interactions, from consensus and dissensus, and emerge as much from common sense as from scientific knowledge. Every representation emerges in relation to other representations and relies on mechanisms of anchoring and objectification (Flores & Serrano, 2019). RS bring up a sense of coherence that comes out of social consensus but also of the continuous negotiation and coexistence with other representations within the same or different cultural groups. Nevertheless, to the extent that they are shared by most members of a social group, certain aspects of social life, like collectively accepted perspectives on things and standards for living, are experienced as objective aspects of reality and serve a fundamental purpose in social coordination (Flick & Foster, 2008; Tomasello, 2003). Nowadays, modern SR are equivalent to the myths and beliefs of tribal societies.

Social representations are activities rather than crystalized objects. They involve affective, cognitive, and symbolic content that guides people's behavior individually and collectively. They rely on cognitive operations like classifying, describing, and explaining, according to shared views, norms, codes, and ultimately ways of making sense of the world that are communicated between people at one time and intergenerationally (Flick & Foster, 2008).

SR of gender are "the constituent and socially constituted thoughts that explain the social behavior of women and men" (Cortés, 2011, p. 96). Gender representations synthesize implicit and explicit social norms that act as informational assumptions (Wainryb, 1991) allowing for the social organization and coordination of individuals around a common notion of "gender" (Flores & Serrano, 2019).

While gender is socially construed, "sex" refers to the biologically defined characteristics of human beings (Ifegbesan, 2010). Nevertheless, for the most part, people experience gender as an objective reality and use sex and gender as interchangeable concepts. Consequently, both men and women create symbolic universes where the feminine and the masculine are linked to their notions of gender, affecting the way in which they interact with each other and with the world (Bruel dos Santos et al., 2013). Beliefs about what men and women are like and lay beliefs about gender help coordinate social behavior between men and women and define social expectations about what it means to behave in feminine or in masculine ways (Ifegbesan, 2010). In all, these sociocultural norms comprise power differences and have consequences on those involved such as social prejudice and discrimination (Lagarde, 1990).

Social Representations of Gender Among Youth

The formation of beliefs and attitudes about gender roles and behavior begins in early childhood, first within the realm of the family (Alan et al., 2018; Endendijk et al., 2013; van Hek & Kraaykamp, 2015; Vollebergh et al., 2001). Subsequently, in modern societies, school and other scenarios of formal education constitute an important setting for the transmission of social knowledge in general (Bermúdez, 2012) and gender knowledge in particular (Bruel dos Santos et al., 2013). Schools can help transform this knowledge to promote gender equality, but evidence suggests that this is not always the case.

Schools are not strange to the presence of gender bias imposed by society (Alan et al., 2018; van Hek et al., 2018). In fact, they may promote the reproduction and validation of existing bias—explicitly or implicitly—through learning; debates about equality, love relationships, or gender roles (González et al., 2019); through discourse and social practice (Díaz et al., 2017); or by endorsing gender stereotypes (e.g., math and sports are easier for boys than for girls, whereas girls perform better in languages and social sciences) and prejudice (e.g., ignoring girls to call on boys) (Bigler et al., 2013).

Cross-culturally, young populations seem to be subjected to the same social expectations regarding gender roles that apply for adults (Fiske, 2017; Koenig, 2018). Consistently, biological

distinctions between sexes have been found to be associated with the perception of gender-specific behavioral patterns and status among the young population reflecting those of adults, such that gender (a perceivable difference among children) may act as a source of asymmetry in terms of power and argumentative force (a hint of social status) (Zapiti & Psaltis, 2012). Also, there is evidence that representations of gender among teenagers organize around two semantic fields—masculinity/femininity and asymmetries and violence (Bruel dos Santos et al., 2013)—that closely map onto similar underlying dimensions of gender constructions found among adults (Connell & Pearse, 2015). To illustrate, views about women describe them as beautiful, flirtatious, conceited, sensitive, and caring (motivated and responsive to other's desires). In contrast, male stereotypes are associated with work, independence, power, and strength (active, daring, and brave) (Bruel dos Santos et al., 2013).

There is ample evidence that traditional masculinity being taught in socialization contexts —like school—is most of the times built from traditional SR of gender (Bigler et al., 2013), characterized by a pro-male bias (Connell & Pearse, 2015; Islam & Asadullah, 2018), where masculinity requires the domination and sometimes repudiation of (allegedly) feminine characteristics. This also includes emotional withdrawal and exacerbated virility, which produces a rigid man, intolerant of other forms of masculinity (Monteiro Silva & Lincoln Barreira, 2021). These SR of gender may inform young people's gender representations, offering a stand from which to interpret social beliefs, values, and behavior in the light of social roles (Arias & Molano, 2010; Bruel dos Santos et al., 2013) (Ramírez et al. 2022).

Similarly, empirical evidence of the SR of gender collected from students' stories and teachers from rural areas in Colombia suggests that relationships between men and women are construed as strongly hierarchical (Arias & Molano, 2010). Accordingly, men are associated with dominance, control, and power, whereas women are expected to act submissively, putting men's needs first and taking on family care responsibilities. Student stories collected by Arias and Molano (2010) suggest a traditional conception of a nuclear family, where each member has a socially assigned role and function. Men are expected to assume leadership, take on the heavy work, and be responsible for the security of their family. Instead, women are considered to be more capable of providing support and thus are expected to be more understanding and sensitive (Arias & Molano, 2010).

The above-mentioned SR of gender contribute to legitimize a belief system where men hold a dominant position over women throughout socialization, which is problematic for both. However, it is possible that intergenerational transmission of gender SR is not homogeneous across all contexts and identities. To illustrate, some empirical evidence suggests that male and female adolescents experience society's pressure to conform to gender roles differently: girls tend to be more concerned with what people think about them than boys (Azaola, 2009). Other evidence suggests that adolescents may get in trouble when pressure to conform to gender stereotypes is high (Heyner et al., 2021). Thus, while gender conformity pressure is high for young men and women, male students exhibit more school misconduct than their female peers, suggesting that some misconduct is bound with male identity formation and enactment of masculinity in adolescence. Consistent evidence collected among young inmates and manager population from an educational center in Colombia suggests the presence of beliefs that reinforce stereotyped ideals of masculinity and femininity, prejudices in relation to sex, prioritizing sexist and homophobic notions of gender roles and beliefs among this population (Orozco et al., 2021). Unfortunately, we found no further evidence of empirical studies on gender representations among the teenage population in Colombia.

Evidence also suggests that SR of gender can be malleable and that socialization agents may play a role in modifying traditional views

(Masullo & Iovine, 2016; Idoiaga & Belasko, 2019). A qualitative study conducted by Idoiaga and Belasko (2019) using a free association technique among Spanish youth suggests that traditional SRs of menstruation are characterized by a stigmatizing, negative, and persistent discourse that portrays it as a dirty and disgusting event. On the other hand, more progressive SRs associate menstruation with the affirmation of femininity and womanhood. Negative SRs were associated with more negative emotions while progressive representations provided a more empowered and emotionally positive representation. Idoiaga and Belasko (2019) thus concluded that the SRs of menstruation are to be situated within a social, ideological, and emotional context.

To synthesize, the above reviewed evidence suggests the importance of studying the role of societal mechanisms designed for the intergenerational transmission of information in understanding the prevalence or the transformation of traditional (and problematic) SR of gender from a critical stance. In addition to this, evidence suggests the importance of identification dimensions like sex and sociocultural context on pressure to conform experienced by younger generations. SR theorizing on objectification and anchoring may help understand the pressure experienced by younger generations to adopt, conform, and endorse gender SR depending on identifying and contextual aspects. Nowadays, social knowledge regarding gender roles is at the core of social debate and young people are playing an important role in that debate, suggesting the importance of their own agency in negotiating and constructing gender representations (Connell & Pearse, 2015). Consequently, it is important to analyze how gender roles and their social implications are culturally transmitted from one generation to the next and how the youth from different sociocultural contexts experience this pressure. While there are some studies in Colombia that suggest the endorsement of highly traditional SR of gender among rural and institutionalized young men, there are not enough

studies on the SR of gender among typical young population from different sociocultural contexts.

Like other Latin American countries, Colombia has important regional gaps in terms of modernization and development (Acosta, 2013). Accordingly, while we foresee an important degree of consensus between SR of teachers and students from both cities, we also expect some dissensus (Wachelke, 2012). For instance, that SR of gender from Ibagué (provincial capital) will be more traditional, while those of Bogotá (a city with greater exposure to global social debates and cultural diversity) will reflect its longer trajectory in the modernization process.

This study builds on previous evidence by focusing on the formation of SR of gender among Colombian younger generations within educational contexts, comparing urban and provincial capital-cities, and identifying both consensus and dissensus in SR by virtue of their sociocultural context.

Method

To explore the SR of gender we performed a qualitative investigation, with the participation of teachers and students from two schools in two capital cities (urban and provincial) in Colombia, a geographically, culturally, and ethnically diverse country. Economically it is considered a middle-income country although it remains the one with the greatest inequality in the region. Bogotá is the capital city of Colombia. It has 7,181,469 inhabitants (data from 2018), of which 52% are women. Almost all the population lives in the urban area. It is a city of great cultural diversity, among other reasons, because it incorporates most of the migration from other regions of the country. Ibagué, on the other hand, is the provincial capital of the Tolima region, with 569,336 inhabitants, 95% of which live in the urban area. Like other intermediate cities it connects the rural and the urban worlds in Colombia and is an epicenter of economic and cultural development.

The schools selected for this study were public, gender-mixed, and of comparable size

in terms of number of students (approximately 3,000). Both had morning and afternoon student groups of similar socioeconomic status located in stratification areas "2" and "3" (low to middle-low income) according to the Colombian socioeconomical stratification system. In Colombia, school completion includes 11 grades. This study only included students from 8th to 10th grade (approximately middle school and high school).

Participants

Participants were included according to a convenience criterion. This study benefited from the voluntary participation of 37 teachers, 25 from Ibagué (8 men and 17 women) and 12 from Bogotá (3 men and 9 women); and 275 Students, 126 from Ibagué and 149 from Bogotá,

(Table 1). Data from 9 participants was excluded from the analysis because they didn't follow instructions.

Table 1
Student Participants Sex, Age, and Groups

Grade	8th				9th				10th*			
	n	Groups	Age mean	SD	n	Groups	Age mean	SD	n	Groups	Age mean	SD
Bogotá												
Women	22	6	13,68	0,65	20	5	15,44	1,30	27	8	15,74	1,13
Men	23	6	14,04	1,07	27	8	14,74	1,46	23	6	16,43	1,44
Undefined	2		0						1			
Total	47	12	13,86	0,86	47	13	15,09	1,38	51	14	16,09	1,29
Ibagué												
Women	34	9	12,97	0,91	18	4	15,09	1,16	21	7	15,15	0,93
Men	33	8	13,38	1,17	15	5	14,53	1,36	5	2	16,75	1,26
Undefined	0				0				0			
Excluded					4	2			5	2		
Total	67	17	13,17	1,04	33	9	14,81	1,26	26	9	15,95	1,10

Note. * Four female participants from 10th grade did not report their age and are excluded from the table—although not from the analysis—.

Instruments

This study was conducted within the frame of a wider research project. Consistently, we will analyze and discuss findings concerning the application of two instruments: first, a word-association task performed by teachers from both schools. Specifically, we asked participants to generate 3 positive and 3 negative words that they associated with two stimulus-words: "men" and "women"; second, a cartoon story created by students that reflected situations relevant to *gender relations*. Students were asked to draw and write a brief story describing what happened in the drawing.

Procedure

Before any data collection, the research team met with each school team and introduced the research project. At this point, teachers were invited to participate and were offered an informed consent form. Before the development of the activity, teachers were also offered a specific form to confirm their willingness to participate. Regarding student participation, parental consent was obtained by school mail or Parent School meetings. All participant students assented to their participation as well.

Most of the data collection procedures were performed in the field, directly with students and teachers. However, some data from teachers was

collected using an online data collection software (Typeform) due to the COVID-19 Pandemic. During the word-association task, teachers were given an envelope that contained separate index cards labeled "man" and "woman", with another label for "positive words" and "negative words" on each side of the cards. They were then instructed to fill each card with 3 positive and 3 negative words that came to mind when they thought of "men" and "women". Teachers chose freely which to fill first. The rest of the teachers did the same online. In both cases, we protected the anonymity and confidentiality of the information. The data were collected in individual envelopes marked with a code created by participants (instead of identifying information) that allowed us to keep track of other instruments used during the research process. In the online activity, participants were also asked to create codes to protect their identities.

For the cartoon task, we handed a sheet of paper to the participants, with space to write their names and select either a sad or a happy face depending on their willingness to participate in the study and allow us to collect and analyze the results from their work. Those students that didn't have parental consent or didn't assent to their participation were placed together in the same groups and participated in the activity just like the rest of the class, but the research team was instructed not to collect their cartoons. Next, we asked students to organize in collaborative groups (same-sex) of 4 to 5 people. Each group draw one cartoon and attached its corresponding text-story. Once they were ready, we instructed them about the task. We offered some explanations regarding cartoons and types of cartoons to help reduce their anxiety regarding the task, which consisted of creating a social cartoon on gender relations, a dimension (along with other two) identified by the Colombian's Law on School Coexistence (Ley 1620 de 2013) as critical for peacebuilding in the country.

For the most part, students agreed on the story and subsequently collaborated to create the illustrations, the story lines, and the brief text-story that explained the cartoon. In most cases they distributed the different tasks: they selected someone to draw the comic, someone else to write the accompanying text, and the rest of the team focused on discussing the script of the story. They were entirely free to organize their contribution to the task as they saw fit. For this purpose, we offered students white sheets of paper for the cartoon and the text-story, pencils, and a small box of color-pencils that they could keep for themselves. Together with these materials, we provided them a separate sheet where they reported sex and age of group participants.

Data Analysis

The collective elaboration of SR gives meaning to the world and allows the communication of that meaning with others (Vergara, 2008). SR of gender allow participants to know, understand, and communicate reality; to guide and justify their behavior through the endorsement of, in this case, gender related beliefs and social practices (Abric, 1994). In addition to this, SRs mark off identity and group specificity function (Abric, 1994; Banchs, 2000; Jodelet, 1989).

Objectification and anchoring are two processes at the base of SR (Calvo, 2021) that explain their emergence and transformation (Moscovici, 1984). Objectification involves conceptualizing an abstract phenomenon, whereas anchoring involves classification and linking that concept with an already existing collectively shared concept, with which the new concept acquires meaning for the group and spreads among the collectivity (Calvo, 2021). It is thanks to SR that people relate to the social world and that events and social actions are interpreted. Thus, we used the SR approach to understand the meaning of gender among participants in the study.

To analyze how gender roles and their social implications are culturally transmitted from one generation to the next we explored the SR of gender with a focus on the educational communities of two public schools, their collective practices, and the

institutionalization of social knowledge about gender (Bidjari, 2011), and triangulated this information. Specifically, we used a thematic analysis technique as proposed by Braun and Clarke (2006) to analyze and interpret information collected from students and teachers from both educational communities. This meant identifying, organizing, analyzing in detail, and reporting patterns or themes based on the information collected (Mieles et al., 2012).

During the familiarization phase of the analysis, information collected from teachers was examined, organized according to participants' groups, and transcribed into a database using Excel software. After several trials of data exploration, we identified emerging ideas and subsequently generated initial codes in a continuously reflective process. This was followed by a search for common themes that were analyzed in detail identifying patterns (see Figures 1 to 8). Once we agreed on a final version of higher order themes, we defined the content and the scope of the themes that constituted the base for a meaningful story. For the younger participants, the thematic analysis of the cartoons was performed using N-vivo 12 pro. Cartoons were organized, classified, and inputted into the N-vivo software. Subsequently, we followed the same procedure that we used to analyze the information from teachers. During all stages of the analysis, there were at least three judges. Disagreement between them was resolved by debating until an agreement was reached.

Results

The thematic analysis included the free positive and negative associations for the stimulus words "men" and "women" of 37 teachers (25 from Ibagué and 12 from Bogotá) and 72 cartoons and their accompanying stories (35 from Ibagué and 39 from Bogotá).

Information and Attitudes

Socially representing involves information (knowledge and beliefs) that is spontaneously produced among students and teachers; supported on tradition and consensus; orally transmitted in conversation and rumor; within a specific sociocultural context. Social networks, massive means of communication, and daily activity and communication are a source of information about gender for teachers and students regardless of their location.

Beliefs add to and strengthen the existing structured system of beliefs that will result in SR (Fraser, 1994) of gender. Altogether, the interpretative analysis of information revealed a set of underlying beliefs for the SR of gender of participants from both cities (see Table 2).

Table 2

Beliefs about Men and Women's Gender Roles from Ibagué and Bogotá

Women	Men
Ibagué	
Women are unconditional.	Men are transgressors.
Women are accommodating.	Authoritarianism is natural to men.
Women should be soft.	Men act by instinct.
Women are Mamma bears.	Men are selfish.
Women value other people more than themselves.	Male audacity/boldness has two faces.
Women shouldn't be irreverent.	Men are naturally strong and intelligent.
Women get carried away by emotions.	Men love.
The woman that exposes herself loses.	Men offer support.
	Men are wolves in sheep's clothing.
	Men do harm.
Bogotá and Ibagué	
Men propose, women dispose.	Men propose, women dispose.
The biology of the femenine body is a life-sentence/tragedy.	Men must be smart (know how to hide their intentions).
Women should keep their emotions under control.	Men don't control themselves.
Women are caretakers.	

Women	Men
Bogotá	
Women should control their own behavior. Women can be run over. Women are objectified. Infantile women are pretty. Women offer tender and maternal love. Vindicating women's rights is a public activity. In private, dissatisfied women are crazy.	Men should exhibit physical and emotional strength. Men are partners. Men provide security. Men can be stigmatized and victimized too. Men are aggressive and dominant. Men cannot lose control over things. Men can't wait, they don't control themselves.

Attitudes of favorability or disfavorability are fundamental and primary elements in the formation of SR (Parales & Vizcaíno, 2007). They are simultaneously based on shared knowledge systems (Fraser, 1994) and modeled within the framework of a classified system (Rateau, 1995). Participants' attitudes regarding social roles of men and women in Colombian society appear to be old fashioned, conservative, and traditional, consistent with a Christian religious interpretative system and a male dominated society. The transcendentalization of concrete events turns the beginning of sexual life and female sexual behavior into damnable acts disqualifying and devaluing women. Similarly, the notion prevails that men are naturally —instinctively—abusive, aggressive, and even violent. There were positive attitudes toward beautiful, affectionate, and politically correct men and women, and even more so toward caretakers and paternal/maternal roles. Meanwhile, negative attitudes were reported against characteristics and behaviors that contradict the standards of beauty and self-control, like aggression and violence. Overall, men and women's SRs of their roles seem widely stigmatized, anchored in traditional gender stereotypes, and objectified by metaphors and meanings of wicked macho men and gullible, afflicted, and martyred women.

Figurative Core

The figurative core is the interpretive dimension of SR (Moscovici, 1979). It is about the materialization of the meaning of gender for students and teachers. Accordingly, it articulates the information and attitude-dimensions with categories and themes that emerged during the thematic analysis (Perera, 2003) presented in Figures 1 to 8.

SR of "women" among students from Bogotá and Ibagué

Students from Bogotá represented women as feminine and highlighted their physical beauty, empathy, and caretaking role as essential attributes of their femininity. Nevertheless, there were negative representations of women, objectified as sexual objects whose value lies on idealized bodies that meet socially imposed beauty standards: "if a woman doesn't have a good body, she is not considered a woman" and rejected when judged to be bad looking by the consumer. There is ambivalence whereby women who find joy in beauty are interpreted to be vain, arrogant and unpleasant.

To these young students, women suffer, they are martyrs, thought to accept mistreatment and abandonment as inherent to the female gender. There were numerous references to the exclusion, submission, and victimization of women that end up feeling prisoners in a deceiving world that ignores them and blames them for their "mistakes", leaving them to deal with pregnancy, abortion, mistreatment, violence, and extortion by themselves as if these situations were their sole responsibility to deal with; this, in contradiction with an attribute that appeared in several comics where women's naivety seemed to be praised. Naivety makes them vulnerable, easily subjectable, and socially immaculate, virginal, which in contexts of machismo makes them particularly attractive: women that don't understand, don't know, don't demand, and accommodate. When victimized, women endure, are resilient, and successfully deal with adversity. Successful women play the naive girl role but don't get entrapped.

Figure 1

Emergent Categories and Themes Regarding "Woman" among Students from Bogotá
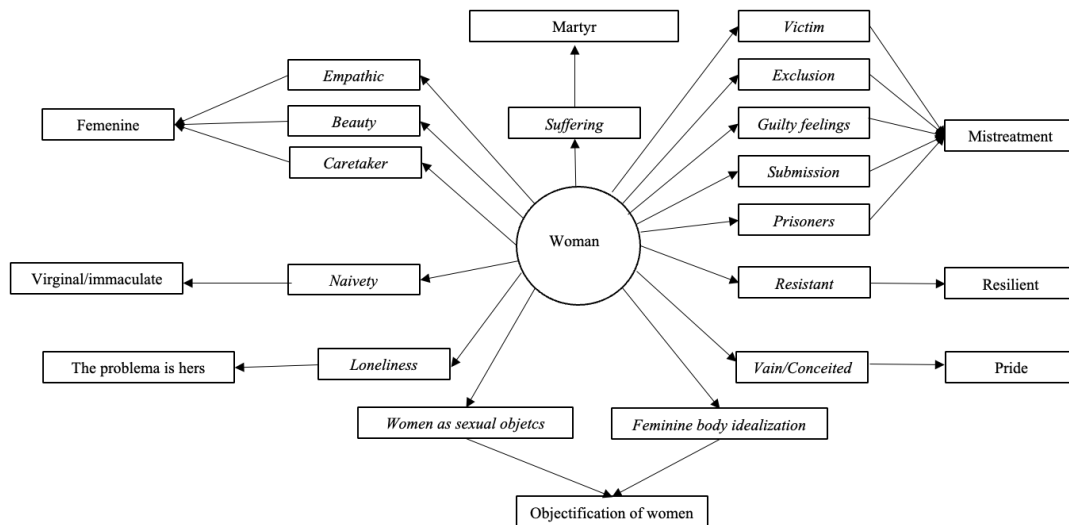
Note. Emergent categories (*italic*) and themes are represented in rectangles.

Figure 2

Emergent Categories and Themes Regarding "Woman" among Students from Ibagué
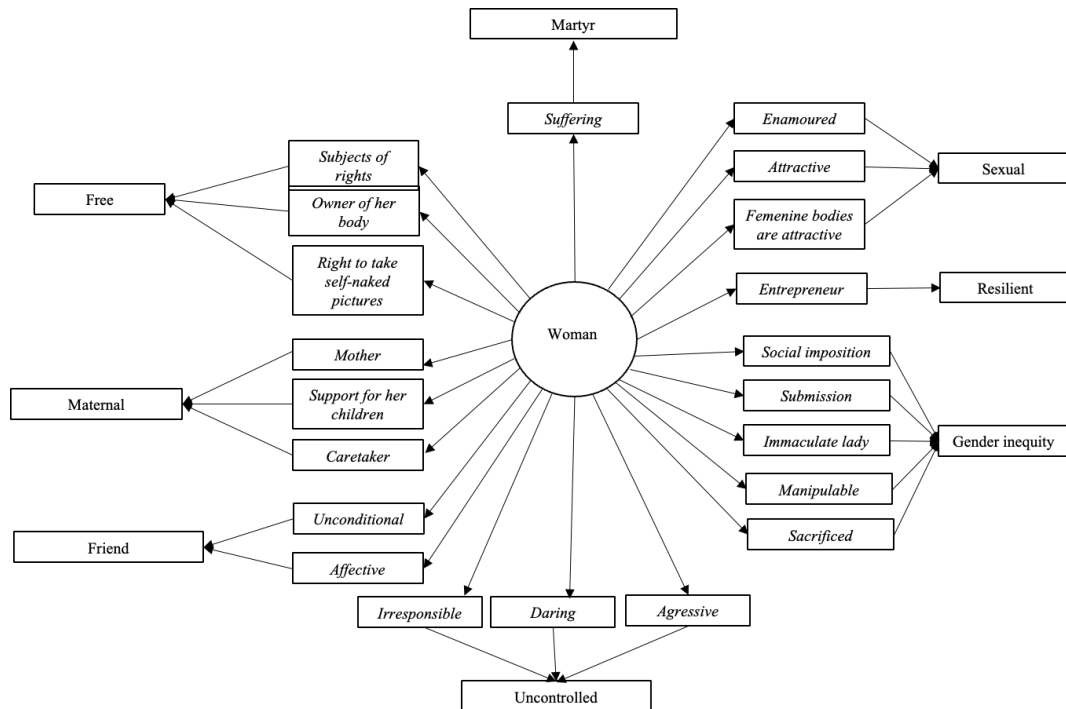
Note. Emergent categories (*italic*) and themes are represented in rectangles.

Students from Ibagué, on the other hand, represented women as sexual, enamored, and gifted with body characteristics that are of special attractiveness to men. While in both cities female bodies were an issue of concern, SR among students from Ibagué represented women as free, holders of rights, owners of their own bodies. However, sexually empowered and sexually active girls who openly expressed their interests or decisions on sexuality appeared to be associated with negative outcomes: STDs, mistaken pregnancies, and the perception that having a child when young ruins a woman's life.

Students also highlighted their resilience, tied to their entrepreneurship ability. Maternal qualities and friendship emerged as topics with positive affective and relational content. Women were represented as mothers, supportive of their children, natural caretakers, unconditional friends, and affective beyond their role as mothers.

Finally, women were also represented as lacking self-control, irresponsible, daring, and aggressive. They were thought of as living in a world of gender inequity subjected to the imposition of their role and the expectation that they will care for others, be submissive, be impeccable in terms of sexual behavior, projecting themselves as immaculate, docile, naive and self-sacrificed.

SR of "men" among students from Bogotá and Ibagué

Figure 3

Emergent Categories and Themes Regarding "Man" among Students from Bogotá
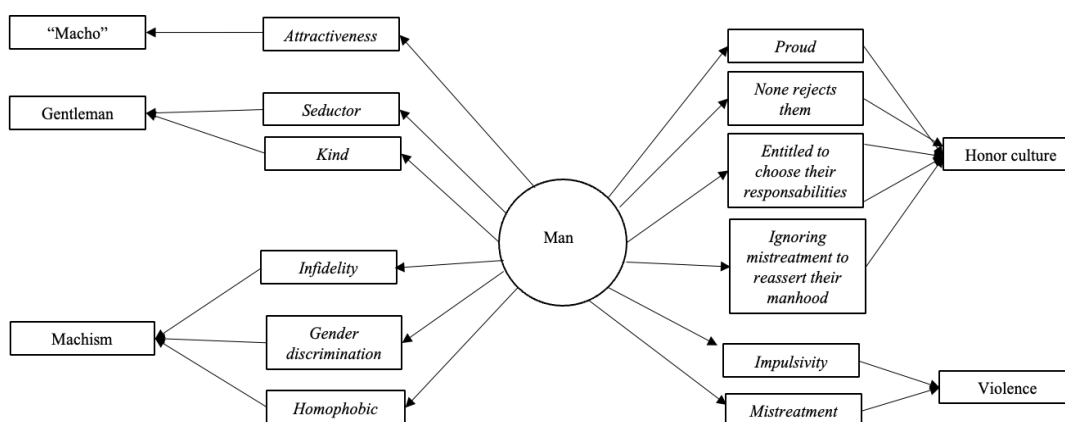
Note. Emergent categories (*italic*) and themes are represented in rectangles.

Students from Bogotá represented men as machos in relation to their physical attributes, a notion that approximates the evolutionary vision of males displaying their beauty to attract potential mates. Men were portrayed as gallant, seductive, and attractive, not only by virtue of their physical appearance but for their charm, which no one (especially women) can reject.

To these students, gallantry seems to open the door to machismo when it connects with violence through the belief in male's apparent inability to control impulses, which excuses maltreatment, unfaithfulness, homophobia, and gender discrimination. This in turn reaffirms a man's manhood, of which he feels proud, ignoring the abuse exerted on others, choosing what he wants, and how or when he wants to take responsibility for his actions. The social representation of an "evil", opportunist, and capable of harm man also predominates in these students.

Figure 4

Emergent Categories and Themes Regarding "Man" among Students from Ibagué
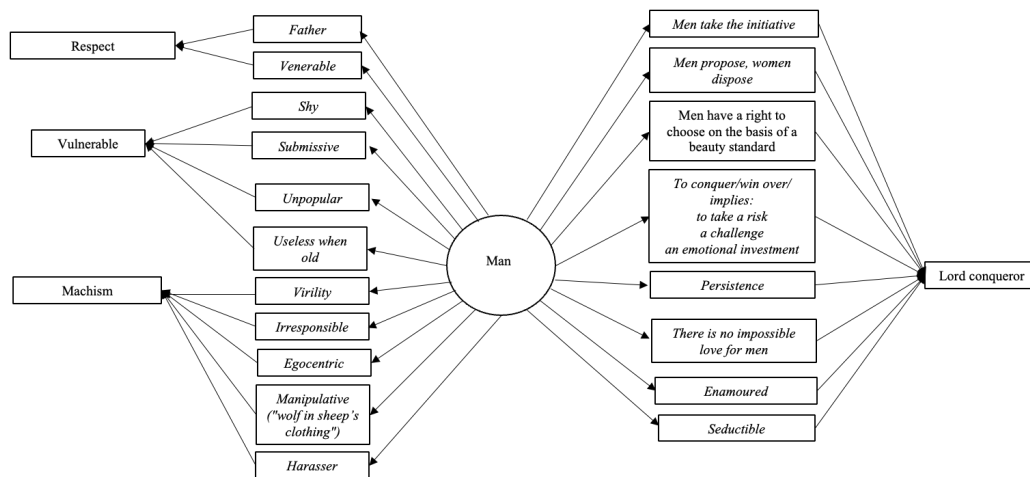
Note. Emergent categories (*italic*) and themes are represented in rectangles.

Among students from Ibagué, men are thought to be respectable. This is evident in their allusions to the father figure, venerable and cultured, and to men as conquerors, seducers and seducible, who fall in love but do not suffer like women because "love is never impossible for a man". Men seem to have social permission to choose their partners based on beauty standards. They also take risks and strive to conquer their goal (the woman) by taking the initiative, persisting, and making a frank emotional investment, since the final decision rests with her. It is she who accepts or rejects a man's proposal.

Students from Ibagué reject male vulnerability. Shy, submissive, and unpopular men are seen as losers, and older men are thought of as unproductive and useless. Men are expected to be virile, courageous, energetic, sexually capable, and have very masculine physical attributes. However, they also identified men as egocentric machos, entitled to violence, irresponsible behavior (abandonment, absence, avoidance), harassment in multiple scenarios (sexual, parental, etc.) and manipulative behavior (lying, cheating); a wolf in a sheep's skin.

SR of women among teachers from Bogotá and Ibagué

Among high school teachers from Bogotá, SR of gender appear to be construed in a context of social and gender inequity. This is represented in several forms of discrimination (stigmatization, machismo) that validate and reproduce viewing women as servants, weak, and submissive.

Here women are seen as emotional, and their sensibility, endearment, and loving disposition are legitimized as maternal attributes. However, they are attributed a tendency to lose control both emotionally and behaviorally. Trapped in an unequal world, they are stripped from their ability to act assertively and, when angry or in pain, they are seen as resented, melancholic, negative, and conflicting. In a few words, their desperate and forever unresolved claims are dismissed as *cantaletas* (constant unconformity and complaining).

An idealized social representation of women symbolized them as "the" beautiful sex, highlighting beauty and sexual attractiveness as mainly feminine attributes. Submission is expected from women, particularly in the context of sexuality, where they are thought of as subordinated, and either unable or hardly capable of making decisions for themselves concerning their own bodies.

Given their status as objects, there is no social commitment to them. Offensive behavior and transgressions against them are accepted and thus women are subjected to disrespect, mistreatment,

abuse, and even lethal violence as in femicide. Nevertheless, within the frame of abuse, women are thought to vindicate themselves on their strength, their struggle, and ability to pull themselves up from hardship. Women rebel and free themselves by being *verracas*, taking responsibility and finding their own creative solutions to their plight.

Figure 5

Emergent Categories and Themes Regarding "Woman" among High School Teachers from Bogotá
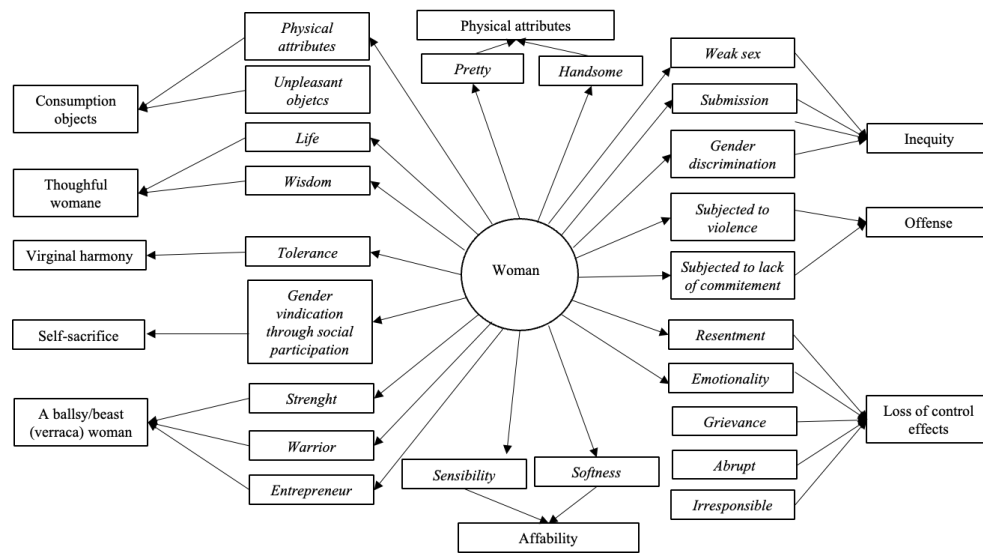
Note. Emergent categories (*italic*) and themes are represented in rectangles.

Figure 6

Emergent Categories and Themes Regarding "Woman" among High School Teachers from Ibagué

Note. Emergent categories (*italic*) and themes are represented in rectangles.

Teachers from Ibagué represent women as synonyms of life, beautiful sex, gifted with desirable physical attributes. They are also portrayed as holistic beings, harmonic, example of reflection, impetuous, and attentive. Their thoughtful attitude translates into wisdom, intuition, intelligence, tolerance, and virtuous patience. Teachers from Ibagué see women as peacebuilders and mediators, while those from Bogotá think of them as haughty and vindicators of their rights that mobilize to conquer their collective goals. This goes along the lines of the representation of women as *verracas*: strong, warriors, entrepreneurs, and hard workers. A determined woman does not give up, yet her struggle doesn't drive her apart from affection, which turns them into a template of sensibility, devotion, endearment, and kindliness.

Teachers from Ibagué hold representations where feminine emotional attributes complement caring and protection. It is within this frame that women become natural caretakers and come to symbolize home. This group of teachers' ideal woman is described as extraordinary, virginal yet sensual and romantic, loyal, devoted partner, capable of bringing harmony, supportive, understanding, and a good friend.

SRs identified in this study among teachers from Ibagué also suggest that women are seen as unbearable, meddlers (gossipy), dictators, possessive, restless, jealous, controlling, manipulative, dominant, intransigent, stubborn, and able to impose their will upon others.

Figure 7

Emergent Categories and Themes Regarding "Man" among High-School Teachers from Bogotá
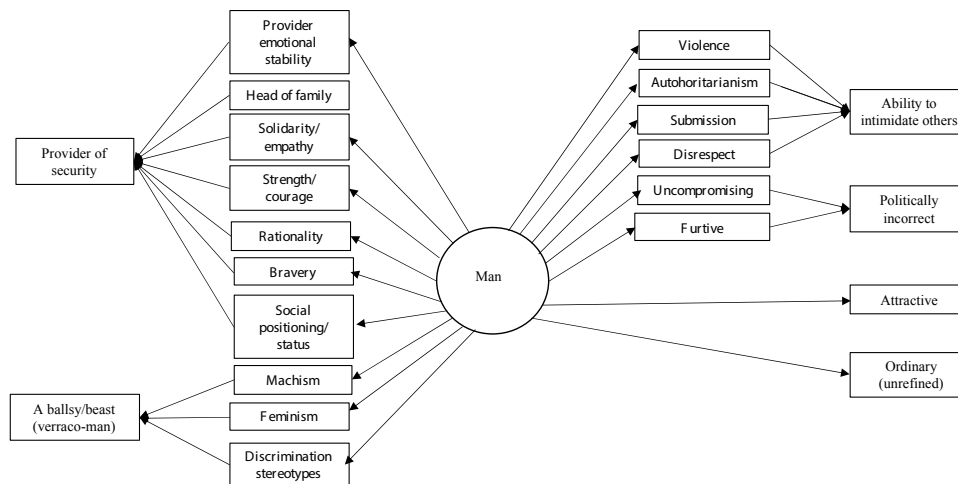
Note. Emergent categories (*italic*) and themes are represented in rectangles.

Teachers from Bogotá represented men as providers of emotional, economic, and physical security. As heads of the family, their role involves protecting their relatives and being responsible and hard working fathers. They are seen as the "stronger" sex: courageous, fighters, with capacity to work. Men are also thought to provide economic security, the family's livelihood, and emotional security as purveyors of love and endearment. The mix of instrumentality and affection contributes to their representation as solidary, empathic, collaborative, companionable, and complementary. To this group of teachers, men enjoy social status and recognition. Men enjoy physical attractiveness, linked to their masculinity and strength, which translates into their recognition as "machos", an expression that

conveys negative and positive meanings of the male gender. Unlike women, that tend to lose control of their emotions, men are characterized as rational, smart, master minders, audacious, risk takers, creative, enthusiastic, and brave.

Machismo and inequity are prevalent in Latin America. Within this frame, men are also represented as capable of intimidating and subduing others using their strength, rudeness, and power. This also includes behaviors such as disrespect, authoritarianism, aggression, abuse, bad treatment, and even crime. Men are seen as disobliging, entitled to be unfaithful, advantageous, irresponsible, unconcerned, rough, and rude. Like women, men may be stigmatized and discriminated against for being violent.
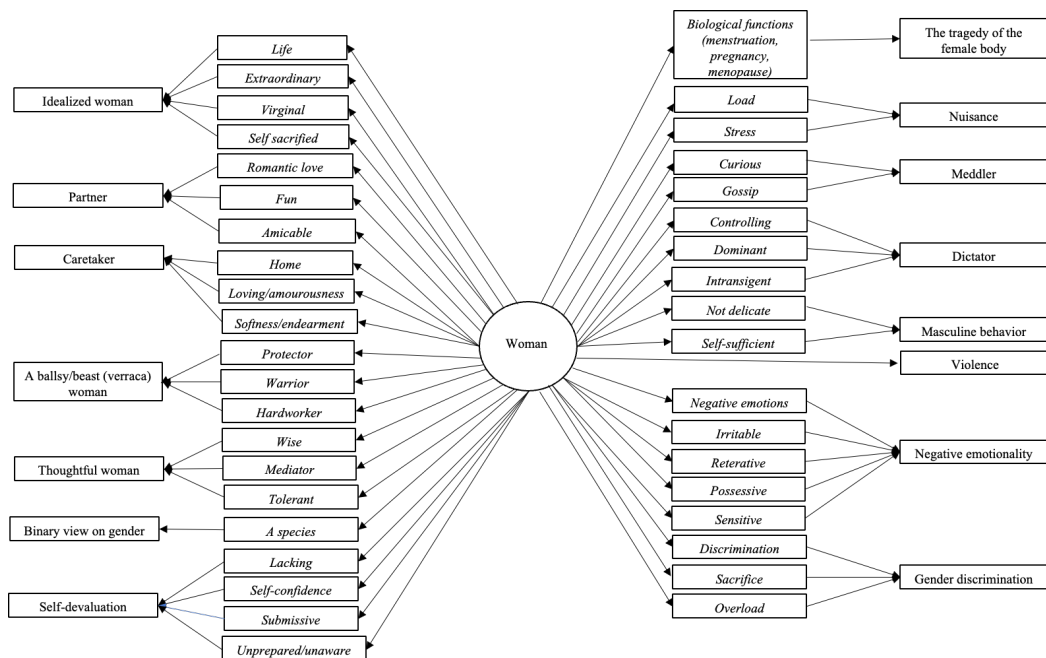
Figure 8

Emergent Categories and Themes Regarding "Man" among High-School Teachers from Ibagué
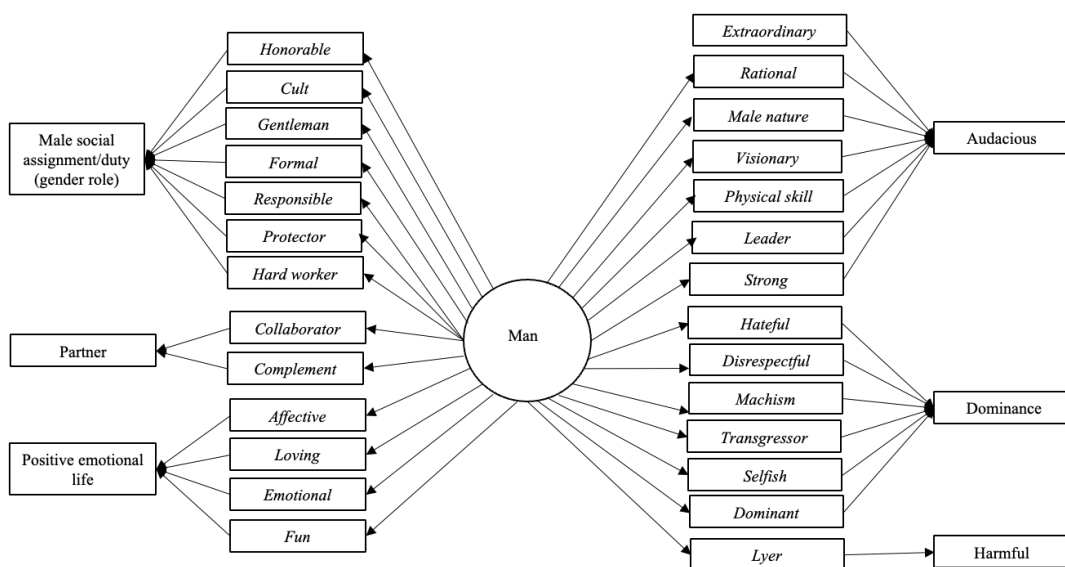
Note. Emergent categories (*italic*) and themes are represented in rectangles.

Teachers from Ibagué also represented men as capable of doing harm through the means of lies, hate, and disrespect. Dominance stands out as a strong image. It represents macho men that transgress and abuse others. Being dominant sanctions being impostors, authoritarian, stubborn, intolerant, angry, controlling, smashing, and powerful. Dominance justifies machismo, selfishness, and brutality. Men are allowed to be impatient, impulsive, destructive, violent, harsh, an uncontrolled force, and frankly elemental, instinctive, unreflective, and unaware. Like SR of students from Ibagué, men are forbidden to be submissive, weak, cowardly, fearful, insecure, shy, or whining.

Nevertheless, men are audacious, rational, natural leaders, crafty, strong, skillful, and visionary. They take risks to fulfill their dreams. They undertake, create, and choose. Their duties, by virtue of their gender roles, include protecting others by means of work, responsibility, and by being gallant, gentlemanly, honorable, noble, cultivated,. Also, formal, elegant, sober, and dignified. Affectively, men are partners, collaborators, offer support, help, and are capable of positive emotional lives whereby they come up as fun, affectionate, and loving.

Discussion and Conclusions

This study's goal was to analyze the SR of gender of teachers and high school students from two public schools located in Bogotá (metropolitan city) and Ibagué (intermediate city), while exploring intergenerational commonalities and differences between them and considering different trajectories on the modernization process. Our analysis revealed that participants' own and socially constituted thoughts (Cortés, 2011) contribute to explain their social behavior in relation to gender roles and relations and, simultaneously, offer valuable information regarding social implicit and explicit norms (Wainryb, 1991) about gender in the Colombian context. Consistent with previous evidence, our findings suggest that traditional norms reinforce ambivalent sexism: hostile and benevolent (Glick & Fiske, 1999), which combines status differences with intimate interdependence (Fiske, 2017), still legitimizing macho interaction styles where social prejudice and discrimination remain prevalent (Bigler et al., 2013; Lagarde, 1990).

Even in the 21st century, in which feminist movements proclaiming gender equality have become visible in Colombia and everywhere in the world, machismo and sexism remain as defining features of the developmental environment of both teachers and students. This confirms that school is not free from gender bias (Alan et al., 2018; Heyner et al., 2020). In fact, it may be an important scenario for the transmission of information that reproduces and strengthens traditional SR of gender and prejudice, be it implicitly (Díaz et al., 2017) or explicitly (González et al., 2019).

Our findings also suggest that, just like teachers, students have anchored gender roles in hierarchical relations, as proposed by Arias and Molano (2010). Men are visualized as controlling, dominant, authoritarian, powerful, leaders, strong, and protective. In contrast, women are represented as feminine beings whose attributes revolve around beauty, nurturing, docility, and submission. Again, these findings are similar those of Arias and Molano

(2010) in which women were also represented as supportive, understanding, sensible; and also (partially) to those of Fiske (2017) and Koenig (2018), who identify agency and strength as the behavioral norm for men, and nurture and submission as the social norm for women cross-culturally. In line with the arguments of Fiske (2017), our findings support the idea that gender stereotypes share common features despite the cultural variability between Bogotá and Ibagué in relation to level of modernization and age difference (Koenig, 2018).

Nevertheless, similar to Orozco et al. (2021), we also found some elements that could suggest important and definitory aspects of gender SR in the Colombian culture. Specifically, in SR of Colombian women, endurance and hard work appear to be at the core of the representation conveyed by the word *verracas*. Our analysis suggests that this word has two associated meanings. On the one hand, *verracas* means being hard working, which is positively evaluated. On the other hand, the meaning of this word can be bended to become a justification for the continuous abuse, abandonment, and mistreatment that women are often subjected to. This indicates that conformity, endurance, and creativity to deal with adversity by themselves is a good thing, almost like a Christian martyr. Feminine endurance, congruent with the role of a resigned victim, a martyr by nature, is rewarded with social approval and consideration, reinforcing the adoption of this aspect of the feminine role.

Consistent with Bruel dos Santos et al. (2013), our findings show that gender SR entails asymmetries and violence. In fact, violence and discrimination against women represent continuous threats that may precipitate defensive behavior expressed as anger, resentment, hard feelings, and bitterness—in short, *cantaleta*—that, rather than being understood as self-protective mechanisms, are judged as disgusting, mocking, or despicable. Behind a continuous *cantaleta* there is despair, a cry for help, a woman's channeling exhaustion

from living on the edge. This is, however, socially understood as a sign of fragility and lack of restraint.

Even beliefs and stereotypes evaluated by teachers and students positively (e.g., women are beautiful, men are strong, women are nurturing, men are protective) seem to reinforce sexism as suggested by González and Díaz (2018), who point out that sexism toward women is a predictor of sexism toward men as well.

Our findings call attention to the fact that younger generations continue to endorse beliefs that reinforce stereotyped ideals of femininity, masculinity, sexism, and discrimination between gender roles. To illustrate, cosified, virginal, resilient, submissive, mistreated, and martyred women versus macho, violent, and yet chivalrous men. This is in line with findings from Orozco et al. (2021).

Another relevant aspect that we bring forth with this study is the negative representation of the feminine body. Having one, with all its associated physiological implications (e.g., menstruation, pregnancy, menopause) is seen like a tragedy, a disgrace. This contradicts the idealization of motherhood, nurturing, and caring implied in procreation. Once again, it seems there are two opposing implications in feminine biology: one virtuous, one regretful. In the end the social norm dictates that: for women virtuosity comes with the acceptance of pain. This notion that appeared to be stronger in Ibagué than in Bogotá, aligns with Idoiaga and Belasko's (2019) evidence of a traditional social representation that conceives menstruation as dirty, disgusting, and stigmatizing. Yet, in contrast with Idoiaga and Belasko (2019), we found no evidence of another distinctive way of representing menstruation among our participants.

In addition to this, having a feminine body becomes problematic to the extent that it appears to inherently expose women to other risks such as sexual abuse and extortion in association with their attempts to actively, but naively, own their bodies and their sexuality, while submissively conforming to their role (Azaola, 2009). In contrast,

there seemed to be no reflection or questioning of the masculine role, which includes actively deceiving, betraying their partners' trust, and being capable of symbolic and physical violence, among both teachers and students. Our findings support Heyder et al.'s (2021) intuition that conforming to existing male stereotypes has the potential to get young men in trouble. This view of men directly opposes that of men as providers of care and security mostly seen in Bogotá, and honorable and respected mostly evident in Ibagué.

Considering the teachers' fundamental role in the intergenerational transmission, reproduction, and transformation of social knowledge (González et al., 2019, Masullo & Iovine; 2016; Idoiaga & Belasko, 2019), they have an important degree of influence on their pupils' understanding of their social world. It is important that teachers become aware of this and learn to question implicit informational assumptions that lie at the bottom of meaning construction and negotiation, since. This is important because it is a socio-pedagogical opportunity to educate, within the frame of interactions in and outside of the classroom about youngers generations' construction of sexual orientation, gender identity, and the interaction with their peers (González et al., 2019).

Finally, a fundamental limitation of this study was that it didn't include—and thus didn't triangulate—information from parents, which are another important actor in the process of transmission and negotiation of social knowledge and sr of gender among younger generations. Future research should also explore the implications of sr of gender on relationships with others—of the same and opposite sex—and potential asymmetries in power, social status, and relationship dynamics, as suggested by previous evidence from Zapiti and Psaltis (2012).

While the nature of our study keeps us from making generalizations, it contributes to a better understanding of gender relations through the identification of implicit information underlying young people's understandings of gender roles.

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Preschool and School Aggression: Adaptation and Validation of the Preschool Social Behavior Scale in Chile

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Abstract

Recognizing aggressive behavior at an early age is vital to identify problematic trajectories that may increase the risk of behavioral and social adaptation problems at school and during adolescence. This requires scales capable of measuring this behavior. In this study, the Scale of Preschool Social Behavior (PSBS) - Teacher Form was validated using a Confirmatory Factor Analysis (CFA) in a national context. We used a sample of 538 children and 12 educators from 4 kindergartens and 5 public schools in Santiago, Chile. The results revealed two main factors: aggression and pro-social behavior, similar to the original scale. This study contributes to the early detection of physical and relational aggression in the preschool stage through the development of reliable measurements that guide prevention programs.

Keywords: Aggression, preschool, scale, social behavior.

Agresión Preescolar y Escolar: Adaptación y Validación de la Escala de Conducta Social Preescolar en Chile

Resumen

Reconocer el comportamiento agresivo a una edad temprana es vital para identificar trayectorias problemáticas que pueden aumentar el riesgo de presentar problemas de adaptación conductual y social en la edad escolar y durante la adolescencia. Para ello, es necesario contar con escalas válidas capaces de medir este comportamiento en el contexto nacional. En este estudio, la Escala de Comportamiento Social Preescolar (PSBS) – Forma para profesores fue validada usando un Análisis Factorial Confirmatorio (CFA). Se utilizó una muestra de 538 niños, 12 educadores de 4 jardines infantiles y de 5 escuelas en Santiago, Chile. Los resultados revelaron dos factores principales: la agresión y el comportamiento pro-social, que es similar a la escala original. Los resultados de este estudio esperan contribuir a la detección temprana de la agresión física y relacional en la etapa preescolar, a través del desarrollo de medidas confiables que guíen los programas de prevención.

Palabras clave: agresión, conducta social, escala, preescolar.

Introduction

AGGRESSION IS a multidimensional phenomenon that can be classified in different ways based on how it is expressed (verbal, physical), how it is directed (open or concealed) or how it is motivated (reactive or proactive) (Berkowitz, 1993; Bushman & Huesmann, 2010; Crick, 1996; Vitaro et al.,1998). According to diverse array of studies, human beings can begin to show signs of aggression at a very early age. In fact, the likelihood of exhibiting signs of early age aggression reaches its highest point at two and a half years old and then progressively diminishes as children develop social skills and language that allows them to communicate their frustration and emotions more constructively, being these adaptive behaviors (Tremblay et al., 2008). For example, a six-year longitudinal study with a sample of 10,658 Canadian children and adolescents aged 2 to 11 years examined aggressive behavior using face-to-face interview with the Person Most Knowledgeable about the child (PMK). One of the most interesting results was that physical aggression was observed to decrease between the ages of 4 and 11 years and was more frequent in boys than in girls in early childhood (Côté et al.,2006).

Despite this natural tendency to act aggressively, other studies have shown that individuals can vary considerably in terms of the swiftness and frequency with which they show aggressive behavior and have identified key factors that influence aggressive tendencies. The first of these factors is gender and clear differences are seen between boys and girls both in terms of frequency since girls at age 4 resort to physical aggression almost twice as often as boys and then decrease their use of physical aggression before boys do. In terms of the type of aggression, as girls use more indirect aggression between the ages of 6 and 11 and boys show more physical aggression (Archer & Côté, 2005). In addition, it has also been observed that men engage in more physical aggression while women are more likely to use relational aggression through social exclusion or by undermining a person's self-esteem (Crick, 1996; Crick & Grotpeter, 1996).

Other studies have pointed to the usefulness of distinguishing between physical (open, direct) and relational (indirect, social) aggression based on instruments that use more than one factor to measure this behavior (Björkqvist & Niemelä,1992; Crick & Grotpeter, 1996). Another important distinction can be made between reactive and instrumental aggression. Reactive aggression refers to the use of aggression as a response to an actual or perceived offense (hitting, insult as a response to a threat). Instrumental or proactive aggression is not preceded by any offense and instead aggression is used as a tool to achieve or obtain something (resources, domination, social status, etc.). Some authors have linked reactive aggression to an impulsive rage motivated by a desire to hurt someone and as a reaction to an immediately preceding frustration or provocation (Anderson & Bushman, 2002). On the other hand, instrumental aggression has been associated with premeditated, calculated, and often emotionless behavior (González-Peña et al., 2013).

The findings of the investigations and reviews that have assessed child aggression seem to indicate that one of the reasons why studies have generally not been conducted in preschool classrooms is because of the traditional methodology used to measure aggressive behaviors in a school environment have used exploratory instruments that require reading and writing skills, as questionnaires and self-reporting (Ortega & Monks, 2005). To both understand aggression in the preschool stage and to develop effective solutions, it is essential to develop assessment tools that allow diagnostic reports of aggression in school settings to be made (Hahn et al., 2007). The early detection of patterns of aggressive behavior in children is essential to prevent and treat social and behavioral adaptation problems. Many authors have noted that, without prevention, initial risk factors tend to accumulate and increase over time, thereby causing children to begin during elementary education with a high

risk of maladaptive behavior if they leave preschool without learning strategies to control their aggression (Fergusson et al., 2005; Tremblay, 2000).

One of the difficulties of assessing aggressiveness throughout the life cycle is the lack of conceptual clarity of this construct and the absence of a common theoretical framework among researchers (Berkowitz, 1993; Kempes et al., 2005). Nevertheless, tools and strategies have been developed to evaluate aggressive behaviors in children in the school context, through reports made by teachers and educators (Mcevoy et al., 2003). However, the availability of the tools used to assess aggressive behavior in young children still seem insufficient in the Chilean context considering the importance of early detection. Currently, instruments that measure development are widely used, as the Test de Aprendizaje y Desarrollo Infantil, TADI (Chile Crece Contigo, 2018) or the Strengths and Difficulties Questionnaire (SDQ) (Brown et al., 2014). However, no validated instruments in Chile measure aggressive behaviors at preschool age. Pioneering studies of aggression have considered this type of behavior to be a physical and observable act and, therefore, measurable via an observational methodology (Berkowitz, 1993; Bushman & Huesmann, 2010). These tools have also assumed that aggression is a male response resulting from biological differences, skewing research results (Vachon et al, 2014). In contrast, there is currently more interest in studying aggressive behaviors in both genders. As the field of view widened, the study of less visible forms of aggression and of aggression in both genders began in earnest, revealing greater diversity (Björkqvist & Niemelä, 1992; Lagerspetz et al., 1988; Nivette et al., 2014).

At the preschool stage, young children are less likely to naturally inhibit their hostile or aggressive behaviors in the presence of adults and are therefore more likely to initiate and maintain aggressive behavior patterns even when being observed by their educators. This allows teachers to act as valid informants of this behavior (Coie et al, 1990; Crick, 1996). Due to the characteristics of pre-school education and the style of interactions among children, preschool teachers are thus key and valid informants about children's social behavior (Coie et al.,1990).

The Preschool Social Behavior Scale-Teacher (PSBS-T) Scale

The tool validated in this study is the Preschool Social Behavior Scale-Teacher (PSBS-T). It evaluates physical and relational aggression in preschoolers corresponding up to six years (Crick et al., 1997). This scale was validated and adapted from the tool designed to assess aggression and prosocial behavior in school-age children (Children´s Social Behavior Scale-Teacher Form; CSBS-T; Crick, 1996).

PSBS-T has previously been used in other studies to compare different contexts of aggression (Ostrov & Keating, 2014), evaluate prevention programs (Kim et al., 2011), determine the continuity of physical and relational aggression (Ostrov, 2010) and validate scales in preschool population (Fehr & Russ, 2014) as well as assess the effects of violent media and video games on aggressive behaviors. However, there is currently no version of this scale that has been adapted for the Chilean context. Therefore, the purpose of this study is to adapt and provisionally validate the Preschool Social Behavior Scale-Teacher (PSBS-T) scale to evaluate physical and relational aggression in preschools in kindergartens and local schools in an urban commune in Chile.

Methods

Participants

The final sample was 538 children from 3 to 6 years old, as described in Table 1. The sample was selected from one urban community in Santiago of Chile using a convenience sampling design from public elementary schools and kindergartens in the community. The inclusion criteria were to belong to that urban community, from the public system, and be willing to participate in the study. Therefore, we collected data from five Elementary schools and

four Kindergartens using 12 teachers as student informants. Teachers were selected considering more than 3 months in the job, and students more than two months attending to classes.

Table 1
Sample Distribution by Gender and Age

	Age				
	3 years	**4 years**	**5 years**	**6 years**	**Total**
Boys	62	75	112	35	284
Girls	44	86	93	31	254
Total	106	161	205	66	538

Tool

PSBS has a version for teachers and another for parents. In this study, the version for teachers was used exclusively. This version uses a Likert scale with 5 types of answers: 1: "*never or almost never*", up to 5: "*always*". The scale contains 25 items grouped into 6 subscales: (1) Relational aggression, with 8 items (4, 8, 11, 13, 15, 19, 21, and 22), including "*The child tells a classmate that he/she will not play with him/her unless he/she does what he/she wants*"; "*The child tries to make his/her classmates dislike another partner by saying bad things about him/her behind his/her back*"; (2) Physical aggression, with 8 items (2, 5, 7, 12, 14, 17, 20, and 23), including: "*Child kicks or punches peers*"; "*Child pushes peers*"; (3) Pro-social behavior, with 4 items (1, 3, 6, and 10), including "*Child is good at sharing and respecting turns*"; and (4) Depressive affection, with 3 items (9, 16, and 18), e. g. "*Child doesn't have much fun*". The last two subscales are composed of a single item each: (5) Acceptance of the child by peers of the same gender ("*The child is very well liked by peers of the same gender*", item 24); (6) Acceptance of the child by peers of the opposite gender ("*The child is very well liked by peers of the opposite gender*", item 25).

Procedure

The first step in the validation procedure was the linguistic adaptation of the instrument through the back-translation approach (English-spanish-english) of the language by bilingual professionals (Hambleton et al., 2004). Based on this Spanish version of the instrument we developed a content validation of the instrument based on the expertise of three judges with an academic background on the topic in Chile. Two of them are academics from Chilean universities and the other is a practitioner from the Minister of Education. Experts' judge suggestions were focused on a few grammatical gender distinctions, keeping all the rest of the items from the original instruments. Subsequently, a pilot study was carried out with a sample of two classes from a single educational establishment, with 30 students in each class. In general, no problems were reported with the comprehension of the items, except for one (item 15: "This child tells a peer they won't be invited to their Birthday party unless he/she what the child wants"). Based on the pilot application, we edited item 15 related to birthday party invitations that were hard to understand for the Chilean sample.

Moreover, informed consent was obtained from each student. Finally, the application of the scale took place between August and September 2014 by one professional running the study.

Data Analysis

To evaluate the factor structure of the PSBS-T, a Confirmatory Factor Analysis (CFA) was carried out comparing the original structure of four factors (defined by items 1 to 23). However, two original factors were defined by only one item; therefore, only four factors from the original scale were compared.

Given that the scale items are answered with ordinal-type response options, and the assumption of multivariate normal distribution is not fulfilled, the polychoric correlation matrix was obtained and the parameters of the models were estimated using the Weighted Least Squares Mean and Variance adjusted method (WLSMV). The previous procedure allows obtaining a robust modification of the quality statistics of the fit of the analyzed model, as

well as adequately estimating the parameters and their standard errors. Since the study participants belonged to different courses, the standard error produced by the grouping (intraclass correlation) was controlled by means of an adjustment obtained by including the students' course as the *Cluster* variable. The quality of fit of the analyzed models was carried out based on the following statistics: a) χ_2, b) CFI, c) TLI d) RMSEA and its 90% confidence interval. As indicative criteria of a good fit for a model, a non-significant χ_2 statistic, values of 0.95 or higher for CFI and TLI, and a value less than 0.08 for RMSEA have been proposed (Hu & Bentler, 1999). These analyzes were carried out using the Mplus 8.4 software.

Once the model that best fit the data was identified, the invariance of the scale measurement between men and women was analyzed. For this, a Multi-Group Confirmatory Factor Analysis (MGCFA) was performed and it required the comparison of a sequence of three models. *Model 1: Configural invariance*. This model specified the same factor structure for each group, but the estimation of thresholds and factor loadings were freely estimated in both groups. *Model 2: Metric invariance*. In this model, all factor loadings were constrained to be equal across groups, while thresholds were freely estimated excepting those that required constraining to be equal across groups to allow identification of the model. *Model 3: Scalar*

invariance. All factor loadings and thresholds were constrained to be equal across the two groups. To assess the measurement invariance hypothesis, the sequence adjustment level of the previously described models was compared. A statistically significant reduction in the quality of fit between two models indicates the existence of differences in some parameters between the compared groups. Given that each model in the sequence was nested in the previous model, two comparisons were made, Configural vs Metric, and Metric vs Scalar. To assess the statistical significance of the differences in fit quality, the Difftest option of the Mplus 8.4 software was used. A non-significant result in these comparisons supported the measurement invariance hypothesis.

Results

Confirmatory Factor Analysis

The fit quality results for the four-factor model were $c_2(224) = 496.158$, $p < 0.001$, CFI = 0.963, TLI = 0.958, RMSEA = 0.048 (90% CI: 0.042-0.054). For the factor loadings, absolute values in the range 0.57 to 0.96 were observed, all statistically significant ($p <0.001$). Taken together, these results provide evidence regarding the adequacy of the four-factor model. The reliability Omega coefficients were: F1: 0.88; F2: 0.93; F3: 0.84; and F4: 0.63. The estimated parameters for this model are presented in Figure 1.

Figure 1

Four Factor PSBS-T Scale Model
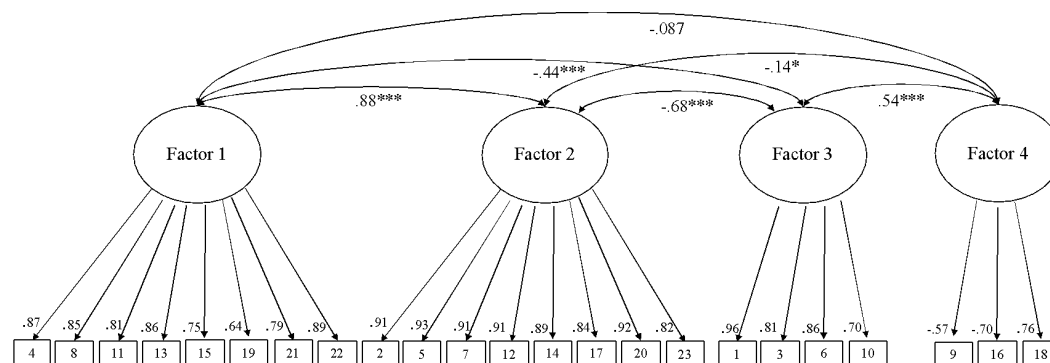
Note. Factor 1: Relational aggression; Factor 2: Over/Physical aggression; Factor 3: Prosocial behavior; Factor 4: Depressed affect. *: p < 0.05; ***: p < 0.001.

Multi-Group Confirmatory Factor Analysis

Once the factor structure for the PSBS-T scale was established, an analysis of the invariance of the measurement according to gender was performed. For this, the adjustments of a sequence of three models were compared, each one more restrictive than the previous one in terms of the invariance of its parameters. The results of these analyzes are presented in Table 2.

Table 2
Results of the Configural, Metric and Scalar models for the PSBS-T scale (N = 528)

	(gl) p-value	a (gl) p-value	RMSEA (90% CI)	CFI	TLI
Configural	808.021 (448) $p < 0.001$	¾	0.055 (0.049, 0.061)	0.966	0.962
Metric	827.462 (467) $p < 0.001$	22.974 (19) $p = 0.24$	0.054 (0.048, 0.060)	0.966	0.963
Scalar	861.978 (531) $p < 0.001$	67.024 (64) $p = 0.37$	0.049 (0.043, 0.054)	0.969	0.970

Note: A comparison of the fit quality of the model sequence was performed using the Difftest option in Mplus.

As seen in Table 2, the comparison of the fit of the Configural and Metric models ($\Delta \chi^2$=22.974, $p = 0.24$) provides evidence in support of the hypothesis of equality of factor loadings for men and women. Thus, these results support the hypothesis of sex. Similarly, the results of the comparison in the adjustment of the Metric and Scalar models ($\Delta \chi^2$ = 67.024, p=0.37) provide evidence for the hypothesis of equality of the factor loadings and thresholds between men and women. Thus, these results support the hypothesis of scalar invariance across sex. Taken together, these results provide evidence for the measurement invariance hypothesis between men and women for the PSBS-T scale.

Once the existence of measurement invariance between men and women (particularly scalar invariance) was established, the differences in the means of the four factors for these groups were estimated. The results indicated that men exhibited lower levels in Factor 3 ($\Delta[\mu_{Male}, \mu_{Female}]$= -1.248, p = 0.03). No statistically significant differences were observed in the remaining three factors.

Discussion

The results of this study confirm the validation of the PSBS-T scale for use in Hispanic urban populations for 3 to 6 years old children, but only with four factors. We did not include the items 24 ("The child is well liked by peers of the same sex") and 25 ("The child is well liked by peers of the opposite sex") considering the need of at least two items to create a factor. Nevertheless, the other four factors provide acceptable fit measures to validate the instrument for Chilean children.

Moreover, gender invariance analysis corroborated the hypothesis regarding possible gender differences for prosocial behavior (factor 3). In other words, when comparing a boy and a girl with the same levels of the factor, the score will be higher for girls. This confirms the results of other studies regarding differences between men and women, even at early ages, in prosocial behavior (Archer & Côté, 2005).

Having tools to measure (Contreras Bravo & Reyes Lagunes, 2009) aggression at an early age is of the utmost importance (Major & Seabra-Santos, 2014). The early detection of aggressive behavior patterns in boys and girls is key to preventing and treating social and behavioral adaptation problems in children. Research in child development has shown that efforts to prevent aggression and development-related problems should begin in early childhood, when learning to control aggression is a developmental normative task, rather than

waiting until the child enters elementary school, when the problem manifests itself in proportion to its clinical relevance (Vlachou et al., 2011). Similarly, early identification supports at-risk students. This is because, when these aggressive behaviors arise in early childhood, they are very stable and predictive of negative outcomes given that approximately half of the children identified with behavioral problems during preschool education continue to show this pattern during childhood and adolescence (Vachon et al, 2014).

This study had some limitations that must be considered. On one hand, the cross-sectional nature of the data partially limited the analysis by incorporating the time variable as a means of observing variations of this scale. In addition, the data corresponded to an urban community in the city of Santiago, and it is possible to hypothesize that this behavior may vary in other contexts. Moreover, we used a convenience sample design in the study that must be considered for interpreting the results. Future studies can replicate the study with other sampling designs and populations. Despite these limitations, this study represents a significant contribution by being the first study aimed at creating and adapting tools and measurements in preschool populations to the Chilean context.

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Identification of Components Associated with the Operation of Mutual Aid Groups: A Scoping Review

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Abstract

This research aims to identify the components associated with the benefits of Mutual Aid Groups (MAGs). Although they have been singled out by the evidence, specific information on their nuclear components is lacking. Based on the methodological approach of Arksey and O'Malley and the Joanna Briggs Institute, all research studies (Pubmed, Scopus, Scielo, Embase, and Redalyc) and gray literature examining these groups were included. The search was carried out throughout 2022 with the following codes: mutual aid groups; self-help groups. We reviewed 62 papers and 37 were included from a total of 2064 articles. The study shows that the components associated with beneficial results are: active agency, coping strategies, recognition, management of emotions, problem-solving strategies, supportive interaction, trust, self-identity construction, and strengthening of social networks. Thus, it reaffirms that MAGs are an effective option to address health problems. The application of these components could also contribute to achieve these benefits.

Keywords: community participation, implementation sciences, mental health, self-help group, psychosocial support systems.

Identificación de Componentes Asociados al Funcionamiento de los Grupos de Ayuda Mutua: Una Revisión Panorámica.

Resumen

El objetivo de esta investigación es identificar los componentes asociados a beneficios de Grupos de Ayuda Mutua (GAM). Aunque han sido recomendados por la evidencia, se carece de información concreta sobre sus componentes nucleares. Con base en el enfoque metodológico de Arksey y O`Malley y del Instituto Joanna Briggs, se incluyeron todos los estudios de investigación (Pubmed, Scopus, Scielo, Embase y Redalyc) y literatura gris, que examinan estos grupos. La búsqueda se realizó en 2022, con el siguiente código: Mutual Aid Groups / grupos de ayuda mutua; Self-Help Groups / grupos de autoayuda. Se revisaron 62 estudios, aunque se incluyeron 37 de un total de 2064. Entre los componentes asociados a beneficios, se encuentran la agencia activa, estrategias de afrontamiento, reconocimiento y gestión de emociones, resolución de problemas, interacción de apoyo, confianza, construcción de identidad y fortalecimiento de redes sociales. Los GAM son una opción efectiva para abordar problemas de salud y aplicar estos componentes podría contribuir a sus beneficios.

Palabras Claves: ciencias de la implementación, grupos de autoayuda, sistemas de apoyo psicosocial, salud mental, participación de la comunidad.

Introduction

STARTING IN 1970, an interdisciplinary collaboration process began that validated both the biomedical, community, and psychological approaches that generated the denominated "new intercultural psychiatry" (Kleinman, 1987). Regarding clinical care processes, other approaches were considered beyond the biomedical perspective. The social environment and community care have become more relevant in the care of people facing mental health problems. This panorama implies some challenges at an ethical, social, administrative, and even epistemological level (Patel et al., 2018).

Especially since 1990, with the Declaration of Caracas, mental health care aims to move from psychiatric clinics with asylum characteristics, and create psychiatric wards in general hospitals. In addition to integrating mental health into primary health care, it is proposed the individual and the community as the axis of recovery (World Health Organization-WHO- & Pan American Health Organization - PAHO-, 1990). The latter concept is articulated in the expression nothing about us without us. Explained as: those who suffer from mental health problems affirm their empowerment and invite them to defend their participation in the structuring of care services and research in the field.

This recovery approach centers the desires of people with mental health disorders as the main focus of the goals of care. Beyond the observable reduction in the manifestation of the disorder, it aims to restoration of cognitive abilities, as well as community and occupational performance. It emphasizes the efforts of the person to live by their own meaning, consistent with the role that each person wishes to carry out in their various contexts. This ultimately will lead to fulfillment (Davidson et al., 2005). Between 75 and 90% of those who need treatment for mental problems do not obtain it in their contexts (WHO, 2016). Hence, so low-cost interventions, as Mutual Help Groups (MAG) in mental health, could be beneficial (Cohen et al., 2012; Nickels et al., 2016).

On the other hand, MAG could be a complementary tool to clinical care itself. This is supported by studies that mention that up to 70% of patients remain depressed after treatment and 50% will not continue with the drugs due to side effects (Connolly & Thase, 2012; Rosenblat et al., 2019; Kelly et al., 2019). In some cases, it has been proposed as a mechanism to improve the financial pressure associated with psychosocial disability (Russo et al., 2007; Kelly et al., 2019).

Although it has been mentioned that there is a lack of agreement on definitions of MAGs (Chaudhary et al., 2013), multiple definitions agree in groups where mutual peer support is provided. These face-to-face or virtual meetings are designed, in response to mental health problems or situations. The control of the group remains with its members rather than with an external agency (Chaudhary et al., 2013; Wilson, 1994; Borkman, 1999; Steinke, 2000; Baldacchino & Rassool, 2006). Self-help groups are described as "groups composed of people who meet regularly to help each other cope with a life problem" by the American Psychological Association (APA, 2019). MAGs have also been described as mutual aid and mutual support groups, as well as the broader terms self-help groups and mutual aid groups, or peer support groups (Pistrang et al., 2008).

On the other hand, core components are denominators in empirically proven treatments that serve as a reference point for the understanding, implementations, and evaluation of an intervention. These may be techniques, contents, or discrete skills (Chorpita et al. 2005; Garland et al., 2008). Consequently, this core component approach to evidence-based practice improves better decision-making when implementing health strategies or plans (Chorpita et al., 2007).

Some previous studies as the one by Rettie et al. (2021) sought to determine the core components in support groups led by peers, that are very similar to MAGs. It highlighted the following components concerning problematic substance use: linkage to community support, structured environment, healthy lifestyle, expectations of positive and negative consequences, involvement in protective

activities, adequate reward system. Also, there were found as components regarding the problematic: management of high-risk situations, trust-building activities, developing assertive communication style, and presence of people who support their recovery. The most important considered core component was the ability of the group members to improve their self-confidence and the less important component was the provision of group rewards. Although self-help groups have some evidence supporting their effectiveness, there is still no clarity on the appropriate way to document their effect. Qualitative and quantitative methodologies have been used to document their positive consequences and the processes that lie beneath.

Qualitative approaches have shown beneficial outcomes in MAGs, while quantitative studies that, for the most part, examine outcomes in psychiatric symptoms, show mixed effects, especially on symptoms and social functioning (Pistrang et al., 2010). However, some authors as Humphreys & Rappaport (1994), propose that quantitative methods may not be the most suitable to evaluate MAGs in their entirety. This due to the aspects mentioned in its definition (characteristics difficult to control and randomize). Some meta-analyses that have included randomized studies mention the little impact on clinical manifestations (Lloyd-Evans et al., 2014). But it is mentioned that these studies are largely randomized and the causal mechanisms remain unspecified (Markowitz, 2015).

Qualitative studies focus on variables as empowerment, social cohesion, and life skills. While quantitative studies focus on psychiatric symptoms' outcomes, most often without integrating both aspects into a single model. Making the ability to specify the core components by which these MAGs achieve certain benefits, particularly challenging (Markowitz, 2015). Specifying these components could be very useful in the implementation of the groups, especially in countries facing difficulties accessing mental health care and recovery strategies.

Although these strategies for the recovery of mental health are widely recommended by scientific studies and public policy documents, some methodological elements have not been described or explored. This impacts their correct application and the achievement of the objectives that are proposed. Based on the above, this article aims to identify the components associated with mutual aid benefits.

Materials and Methods

This scoping review is based on the methodological framework introduced by Arksey and O'Malley (Tricco et al., 2018) and the methodology manual published by the Joanna Briggs Institute for scoping reviews (Peters et al., 2015).

Sample, Inclusion, and Exclusion Criteria

To perform the scope search, Crochrane, Pubmed, Scopus, Scielo, and Redalyc databases were taken as well as grey literature searches (similar search terms aimed at providers, agencies, care support services). The boolean code was selected from MESH descriptors and definitions widely accepted in the literature, this in the case of the term mutual aid groups. The investigation was carried out from the following keywords (MESH and DESC): mutual aid groups / grupos de ayuda mutua; Self-Help Groups / grupos de autoayuda, in the mentioned databases. Likewise, manual searches were carried out in the reference lists of the relevant articles to identify the articles and documents that were not generated in the database search.

The search was carried out between January and May 2022, studies from 1990 to 2021 were included. This as the starting year was considered by the recent Declaration of Caracas for that moment. The selected studies had to meet the following inclusion criteria: experimental, quasi-experimental, observational studies, guides, narrative reviews, and policy or program documents, that examined health mutual aid groups were included. Those articles that did not have group activities, in most cases were excluded. As well as studies that did not meet the definition of a mutual aid group, and that did not mention core components, were also excluded.

Study Protocol

The steps recommended by the Joanna Briggs Institute were followed (Tricco et al., 2018), in addition to those proposed by Arksey and O`Malley (Peters et al., 2015). PCC strategy [Population, Concept, and Context] for formulating the review question, where P: People with any disease, C: Core components of Mutual Aid Groups, and C: Community Psychosocial Recovery Interventions. The review question was "What are the components associated with Mutual Aid Groups outcomes?".

After the search was conducted, the bibliographic citations were identified in the EndNote X9/2018 program, duplicate studies were eliminated. For the selection of studies, titles and abstracts were initially reviewed according to the inclusion criteria by two researchers. The researchers performed the verification of the eligibility criteria using a random sample of 25 articles. Using Cohen's coefficient κ, the agreement between observers was determined, that was 0.86 (95% CI: 0.66-1.00), considered a good agreement. The selection of studies was made by consensus of the reviewer's panel according to the critical appraisal tools and those that passed the quality assessment were included in the review. They were considered of acceptable quality when the four evaluators agreed on 70% of the elements of the assessment instruments as positive. Two Ph.D.-degree reviewers assessed titles and abstracts according to inclusion and exclusion criteria. The reviewers then independently reviewed each recovered title and summary to determine eligibility using the inclusion criteria. After this, the full text was reviewed to determine its eligibility.

All eligible articles were entered in Microsoft Excel, where the following information was extracted: type of publication, study objectives, the definition of Mutual Aid Group. As well as: the definition of elements related to improvement, description of the elements used in the group, description of the core components, name, and description of the improvement indicator; also, were included: type of indicator (process, result), measurement methods, evidence to support the indicator and results. Data were organized and analyzed using a conventional content analysis approach (Hsieh & Shannon, 2005), referencing research questions as a guide (Levac et al., 2010). Duplicate components or features were removed. If some search results fell into multiple categories, an agreement was sought with the researchers.

Results

Of the 62 articles included from databases and 12 from gray literature, 37 associated some form of benefit of mutual aid groups with core components (Figure 1). Among the chosen research studies, eight related to chronic diseases were found, as cancer, hypertension, diabetes mellitus, stroke. Of bipolar disorder and psychosis, two articles were found, one of them qualitative. On depression and anxiety, nine articles were selected, from quantitative methodologies, including an implementation protocol. On the consumption of psychoactive substances, six studies were found. Six studies discussed core components in mental health problems without a specific diagnosis.

Figure 1
Flowchart of search results
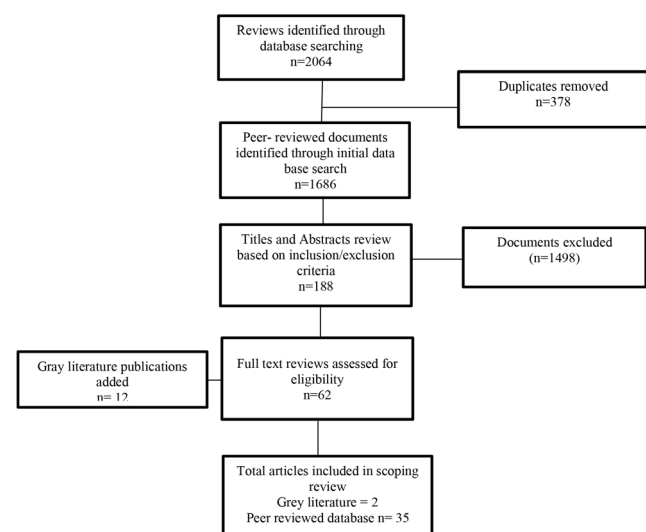
Note. Own elaboration.

Two more mentioned the components in the framework of behavioral problems in adolescents, also two, one qualitative and the other quantitative, addressed caregivers in their theme (Table 1). Subsequently, the grouping proposed by experts considers the following key elements. To summarize the data, we performed a content analysis of the different articles selected and the information recorded in the Excel table. This procedure was done with the aim of detecting the key categories in each of the elements of interest (core component, and benefit) in each of the included articles.

Table 1
Description of the findings

Group theme	Number of papers	Country	Type of research	Year
History of sexual violence	1	USA	Review	2018
Chronic diseases	8	USA (2), Australia, United Kingdom (2), Mexico, Guatemala	Qualitative, descriptive correlational, cases and controls	2016-2020
Bipolar disorder and psychosis	2	USA, United Kingdom	Qualitative and quantitative, descriptive, longitudinal	2014, 2019
Depression and anxiety	9	USA, Germany, Chile, UK (2), India, Ghana, Spain	Review, correlational descriptive, implementation protocol, qualitative, reflection paper	2016-2021.
Substance abuse	6	USA (4), UK, China	Review, descriptive correlational	1996, 2015-2019
Acquired immunodeficiency syndrome	1	USA	Qualitative	1993
Behavioral disorders in adolescents	2	USA, Canada	descriptive, cross-sectional Reflection paper	2001, 2016
Generalities of Mutual Aids Groups and empowerment	6	Ghana, India, UK, Germany	Review, longitudinal descriptive, reflection paper	2012 2019 2015 2017
Caregivers	2	USA	Descriptive Qualitative	2018, 2020

Note. Own elaboration.

Once the relevant data for each study was identified, the elements of interest found in the articles were consolidated under the consensus of experts into a new category. This category was established as a core component:

Coping strategies understood as techniques learned or enhanced in the group that facilitate the individual approach to adverse personal situations. Emotional recognition and management as the identification of aspects on the group dynamics that have not been considered before and that are important for the emotion's identification. Problem solving: understood as the perception of some psychological abilities, including specific techniques or individual strategies that do not belong to a proper technique, that allow facing daily difficulties. Supportive interaction: it can be understood as the active exploration of group actions for mental health by the same people. This with the intention of relating to others who can be helped or from whom help can be received. Trust: group's value that allows group doings in which a person can tell freely what

has happened to them without expecting a value judgment that makes them feel wrong. Identity Building: conceptualized as the identification and appropriation in the group of individual aspects that are part of the personality and that are necessary to consider in each recovery process. Social networks: it is perceived as the recognition of the group as a tool that provides the person with constant availability for their difficulties. Active agency: can be understood as the increase of abilities or moving these skills to functions, which has been obtained through the participation in the group (Table 2).

Table 2
Procedure for consolidating the elements of interest found in the articles, into a new category that was established as a core component based on expert judgment

Category	Definition	Conformation of the concept	Authors
Active agency	Increase of capacities or the passage of these capacities to functions, which have been given from the participation in the group.	Active agency	Bernabéu-Álvarez et al. (2020).
		Acquisition of specific skills	Petrini et al. (2020) ; Sample et al. (2018)
		Empowerment	Stang & Mittelmark (2009); Markowitz (2015)
		Self-determination	Sample et al. (2018)
Coping strategies	Techniques learned or enhanced in the group which facilitate the individual approach to adverse personal situations.	Coping skills	Landstad, et al., (2020)
		Coping self-efficacy	O'Dwyer et al. (2021)
		Coping strategies	Longden et al. (2018); Sample et al. (2018).
Emotion recognition and management	Identification of own difficulties through group dynamics. Included in this code are all citations that explicitly or implicitly mention the processes carried out in the group that made it possible to identify personal difficulties related to mental health.	Emotion recognition and management	Anderson & García (2015)
		Social emotional support	Repper & Carter (2011) Ngai et al. (2021b) Manning et al. (2020); Juarez-Ramirez et al. (2020); Nieto Zermeño (2008).
		Emotional coping	Sample et al. (2018).
Problem solving	Group contribution that occurs by identifying individual coping strategies in group dynamics that had not been considered before and that are important for recovery.	Troubleshooting	Bernabéu-Álvarez et al., (2020); Yip (2002); Gona et al. (2020); Wijekoon et al., (2020); Rossi et al., (2014)
	Included in this code are all citations that explicitly or implicitly mention the construction of new concepts about the individual problem. These from the elements found by itself in the group dynamics.	Self-efficacy	Magura et al. (2007); Ahmad et al. (2021); Carlén & Kylberg (2021).
	It refers to relationships given in the group perceived as horizontal and generating trust between members.		

Category	Definition	Conformation of the concept	Authors
Supportive interaction	It refers to relationships given in the group perceived as horizontal and generating trust between members Active exploration of the same people of group actions for mental health with the intention of relating to other people. Included in this code are all citations that make explicit or implicit mention of activities that show a group dynamic referred to by the participants. In which the possibility of expressing what is thought is shown.	Supportive Interaction	Ngai, et al., (2021A)
		Feedback	Landstad, et al., (2020)
		Sense of trust	Fernandez-Jesus, et al., (2021)
		Cohesion	Fernandez-Jesus et al., (2021) ; Cheung & Ngai (2016)
		Exchange	Bjerke (2012)
		Freedom of expression	Chaudhary et al. (2013) ; Akin et al. (2021)
		Integration	Trojan et al. (2016)
		Shared understanding	Carlén & Kylberg (2021) ; Nieto Zermeño (2008)
		Mutual help	Carlén & Kylberg (2021) ; Avis et al. (2008)
		Active listening	Carlén & Kylberg (2021) ; Nieto Zermeño (2008)
		Equality of relationships	Brown et al. (2008)
		Solidarity	Rossi & Tognetti Bordogna (2014)
		Reciprocity	Valencia Murcia & Correa García (2006)
		Social learning	Gracía Fuster (1996)
Identity construction	This code includes all citations that make explicit or implicit mention of a process of identifying characteristics of one's own personality. Also in the behavior or in the thoughts of the other people in the group. Identification of parental roles, such as father, mother, brother, etc., are included.	Identity construction	Chambers et al. (2017) ; Ngai et al. (2021b) ; Wijekoon et al. (2020) ; Martínez et al. (2021)
		Positive image	Longden et al. (2018)
Trust	Included in this code are all citations that explicitly or implicitly mention Mutual Aids Groups dynamics where the individual characteristics that may be considered problematic by the person do not constitute a difficulty in the relationship with the other. Perception of the dynamics of the group with the freedom to express an opinion or speak what is thought. Reception of particularities of each person without criticism or pointing out those that the person perceives as negative in himself.	Honesty	Chambers et al. (2017)
		Leadership	Landstad, et al. (2020)
		Trust	Fernandez-Jesus et al., (2021) ; Ahmad et al., (2021); Ngai et al., (2021b)
		Engagement	Rossi & Tognetti Bordogna (2014).
		Without hierarchies	Activament Catalunya Associació (2021)
Social networks	It refers to relationships given in the group perceived as horizontal and generating trust between members. Recognition of the group as a tool that provides the person with constant availability for their difficulties, beyond specific meetings.	Democracy	Patil & Kokate (2017)
		Decentralization	Patil & Kokate (2017)
		Social networks	Kelly et al. (2019)
		Mobility	Ahmad et al. (2021)
		Accessibility	Southall et al. (2019)

Note: Own elaboration.

From the proposed categories, it can be observed that the most detected core component in the different studies was that of supportive interaction (16 times). Followed by social networks (11 times), and problem solving and active agency (eight times). Emotion recognition and management was the least identified. The authors who most identify components are Rossi and Tognetti Bordogna (2014), Nieto Zermeño (2008), Wijekoon et al. (2020), and Sample et al. (2018).

After this, the outcomes of the MAGs were synthesized in five categories: Quality of Life, Improvement, Mental Health Learning, Social Functioning, Life Skills, Hope, and the relationship of the components with these outcomes was investigated in the selected studies. The frequency was established for the core component and the benefits, according to the studies that cite it considering the new consolidation. The work of Petrini et al. (2020) is the one that reports the most benefits, being social functioning and health learning the ones that it recognizes. Yip (2002) identifies four benefits where skills for life is the most frequent. Ngai et al. (2021b), Moos (2008), Landstad et al. (2020), and Ahmad et al. (2021) report four benefits in their studies, the most frequently reported being life skills, social functioning, and improvement in quality of life (Table 3).

Table 3
Benefits identified in each of the included studies

Author/Benefit	A	B	C	D	E
Petrini et al. (2020)			X	X	
Yip (2002)	X		X	X	
Ngai et al. (2021a)	X	X			
Moos (2008)	X	X		X	
Landstad et al. (2020)			X	X	X
Ahmad et al. (2021)	X			X	
Sample et al. (2018)	X			X	
Kelly et al. (2019)	X				
Seebohm et al. (2013)	X			X	
Fernandes-Jesus et al. (2021)			X		

Author/Benefit	A	B	C	D	E
Matusow et al. (2013)	X	X		X	
Repper & Carter (2011)				X	X
Southall et al. (2019)		X	X		
Carlén & Kylberg (2021)			X	X	
Ngai et al. (2021b)	X		X		X
Nieto Zermeño (2008)	X		X		
Wijekoon et al. (2020)	X		X		
Mao et al. (2021)			X		
Stang et al. (2009)	X		X		
Cohen et al. (2012)	X		X		
Gugerty et al. (2019)				X	
Cheung & Ngai (2016)				X	
Bernabéu-Álvarez et al. (2020)	X				
Patil & Kokate (2017)			X		
Gona et al. (2020)		X			
Markowitz (2015)				X	
Trojan et al. (2016)	X				
O'Dwyer et al. (2021)		X			
Nickels et al. (2016)				X	
Longden et al. (2018)				X	
Chen et al. (2014)				X	
Brown et al. (2008)		X			
Gracía Fuster (1996)					X
Hernández Zamora et al. (2010)				X	
Avis et al. (2008)		X			
Martínez et al. (2021)			X		

Note. A: Quality of Life Improvement; B: Mental Health Learning; C: Social Functioning; D: Life Skills; E: Hope.

Finally, the relationship between the core component and the detected benefit was determined on a heat map (Table 4). It is found that the components that were most related to benefits were active agency, supportive interactions, and problem solving. Those that were moderately related were trust, identity construction, and social networks. Those that were related to improvement in few studies were emotional management and coping skills.

Table 4
Frequency of relationship between central component and perceived benefit

Outcomes	A	B	C	D	E
Coping strategies					
Emotional Recognition and Management					
Problem Solving					
Supportive Interaction					
Trust					
Identity Building					
Social Networks					
Active Agency					

Note. A: Quality of Life Improvement; B: Mental Health Learning; C: Social Functioning; D: Life Skills; E: Hope.

Present ▮ (red)   Moderately present ▮ (pink)   Absent ▮ (grey)

As Figure 2 indicates, there are components that are more relevant to achieve the benefits of MAGs described by the research reviewed. Other components more related to techniques of health services were not so decisive in the outcomes found, especially Emotional Recognition and Management.

Figure 2

Core components and outcomes
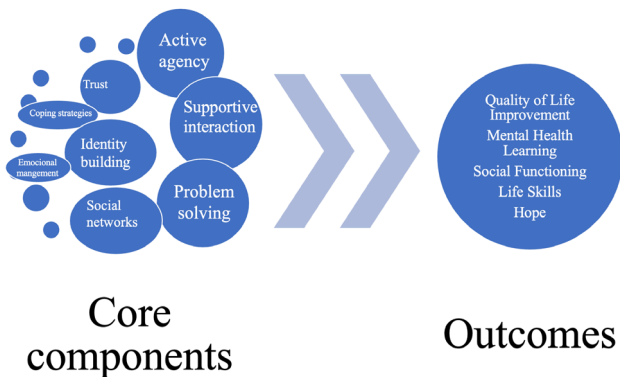
Note. Source: the authors.

Discussion

The objective of this scoping review was to determine the core components associated with positive results in the Mutual Aid Groups (MAGs). The above, seeking to overcome the barriers for the implementation of proposed strategies for mental health (Agudelo-Hernández & Rojas-Andrade, 2021). The results identified a total of 37 documents that allowed their detection. Although there a few studies with similar scopes to the current one, the findings are discussed in the light of different theoretical postulates and scientific literature on the subject.

In this review, the following core components were identified: active agency, coping strategies, emotion recognition and management, problem solving, supportive interaction, trust, identity building, and social networks. Some previous studies as the one by Rettie et al. (2021) sought to determine the components in peer-led support groups, which are very similar to MAGs. And showed the following components in relation to the improvement of problematic substance consumption: structuring a life project, healthy life habits, real expectations, involvement in protective activities. As well as the following components: appropriate rewards, detection of risk of relapse, and self-confidence. The most important component considered was the group's ability to improve self-confidence and the least important component was the provision of group rewards.

The results found in this scoping review differ and agree with some central elements identified in the mentioned studies. However, the different methodologies used to reach their description must be considered. This work generated a new categorization and definition of the central components based on the expert consensus in which the different elements identified in the different studies were consolidated.

For Ngai et al. (2021a), the benefits of the group also have to do with the active role of the facilitators, with their knowledge and skills. The presence of external facilitators has also been analyzed through communicative rationality in the public sphere. This has been considered, in the case of Chaudhary et al. (2013), as fundamental to maintain the independence of powerful structures as the state. Since without this separation, associations would not try to develop according to their

own logic or by creating their own definition of needs (Eley, 1992). The mentioned would imply for MAGs the loss of their role as places where people reconceptualize health and social problems with their direct experience (Munn-Giddings, 2003; Chaudhary et al., 2013; Avis et al., 2008).

MAGs have been specified as spaces where the discomfort that supervision can generate is absent (Akin et al., 2021). Seebohm et al. (2013) argue that many groups acted against stigma in their families, friends, and other stages that attracted considerable interest. This also improved the ability to function socially in terms of learning and development.

Likewise, in MAGs, medical problems are both individual and shared by all, and that also helps to de-stigmatize them, something that Magura et al. (2007), specify as a spiritual component. This refers "to the potentially healing power inherent in interpersonal relationships based on reciprocity and equality". Markowitz (2015) points out that MAGs reduce stigma indirectly. This by contradicting the idea that people with mental health disorders cannot participate in the construction of their own lives, and even of programs. This agrees with Stewart (1990) and Katz (1970). In Yip (2002), among the support strategies provided by other members, those that allowed sharing guidelines for the management of the disease (for example, drug intake) were fundamental. Therefore, supportive interaction, through the communication of feelings and knowledge based on real situations among the members of the group, is related to an understanding of the need for support. Achieving this through the learning of useful strategies for coping with chronic conditions, especially in young people (Ngai et al., 2021b; Magura et al., 2002).

In terms of well-being, Seebohm et al. (2013) found that most groups promoted a healthy lifestyle, exercise, and diet inside of their meetings, including access to complementary therapies, walking groups, and sex education. Thus, generating a perception of MAGs as safe places where members felt cared for. Moos (2008) considers participation

in satisfying and rewarding activities as strategies that are present in this core component. In the same way, Corrigan et al. (2005) conceptualizes that participation in MAGs can have some direct and indirect benefits on the quality of life and the symptom reduction. This through strategies to strengthen the self-concept and to improve social networks that provide social support. In addition to the change of role, from someone who receives help, to someone who gives it in a space to share and take care of oneself and others (Markowitz, 2015; Weaver & Salem, 2005; Repper & Carter, 2011). Other MAGs members specified enthusiasm for being with another, courage and desire to explore as core components of their group (Magura et al., 2007).

On the other hand, income-generating activities allowed the groups to grow. Providing learning opportunities for asset and money management as a precursor to income-generating projects was a critical component of capacity development (Gona et al. 2020). Similarly, for Yip (2002) it is essential in MAGs to carry out processes related to the guidelines to achieve adequate employment. According to empowerment theory, this could correspond to greater control and awareness of the sociopolitical context in which groups operate (Gona et al., 2020; Kieffer, 1984; Zimmerman, 2000; Zimmerman & Rappaport, 1988). Compared to the identity component, Markowitz (2015) mentions that when people with mental illness integrate into significant groups and engage in productive activities. Their self-awareness increases, MAGs assume there is enough power within the group to manage themselves, instead of looking elsewhere for solutions (Carlén & Kylberg, 2021; Southall et al., 2019). So, it can also increase self-confidence (Carlén & Kylberg, 2021).

Along the same lines, other authors (Ngai et al., 2021b; James et al., 2020) have mentioned that as people join in MAGs, they understand their own and others' difficulties. And because of that, they can improve their abilities and turn them into functions. Similarly, the meetings contribute to

the development of norms framed in trust and reciprocity, as requirements for strengthening social capital (Putnam & Nanetti, 1993). This could propose the empowerment variable as a mediator in solid behavioral changes (Gugerty et al., 2019; Stewart, 1990; Katz, 1970).

In this sense, cohesion is essential for the sustainability of a MAG (Cheung & Ngai, 2016). For Yip (2002) those elements that made up group cohesion were sharing data, strengthening dialectical spaces, entering taboo areas. What the authors called a feeling of being "all in the same boat". Within this cohesion, it was mentioned as fundamental to generate conditions in the groups to show "an authentic identity". Considering honesty as a core component of the correct functioning of a MAG (Chambers et al., 2017), and the promotion of communication mechanisms as a group operating strategy (Moos, 2008). The above was reinforced by the concept of sense of community, knowledge and respect of the other, as a step towards self-knowledge. This occurred through mutual learning strategies, that resulted in, apart from increasing that sense of belonging, a decrease in hospitalizations and an ease of access to health services (Matusow et al., 2013).

The provision of affective support has a facilitating role between group relationships and the perception of well-being. In addition, the reception and provision of emotional support sequentially mediated the relationships between group interaction with the purpose in life, being satisfied with life and individual growth. These are part, in turn, of other components (Ngai et al., 2021a). In Yip (2002), among the strategies of support given by other members, those that allowed sharing guidelines for the management of the disease (for example, drug intake) were fundamental. Martin et al. (2009), mentions the control of symptoms as a result, especially in chronic diseases. In these processes of self-knowledge of the disease itself and of the body itself were mediated.

For the above, core components were emphasized as understanding, emotional support, increased confidence, adequate care in quality, continuity and time in health services. Also, good relationship with primary care physician; clinical competence knowledge of the disease and knowledge of medications. In this sense, MAGs have been described as an ideal place to accumulate knowledge about accessibility to local resources and to express opinions on experiences with health professionals (Southall et al. 2019; Carlén & Kylberg, 2021). In the study carried out by Giarelli & Spina (2014), this was described as ways to provide tools for practical life, beyond medical recommendations that cannot necessarily be applied.

Coping strategies have been defined as ones perceived ability to manage "stressful or threatening environmental demands" (Benight et al., 1999), and has emerged as a MAGs strategy for a variety of physical and mental health problems, including stress, anxiety, and depression (Haslam et al., 2014; O'Dwyer et al., 2021). In this sense, for Moos (2008), the reinforcement of the self-efficacy and coping skills of the members, was considered as a fundamental active ingredient of the improvement mechanisms in the MAGs. The exchange of information and individual experiences in the group spaces make up learning through modeling and communication skills, and also this is made by the presence of leaders to follow and the individual guidance provided to the participants in a time even outside the meetings. This is also reported as a mediator of the impact on the increase in quality of life given by the MAGs (Magura et al., 2007).

The inclusion of articles in Spanish, Portuguese, and English represents a limitation of this review. So, it is recommended for future work to consider other languages that may account for the generation of new knowledge about MAGs. Another limitation includes their scientific rigor because of the type of review in the scoping. Although the conclusions generated must be taken with caution, it must also be recognized that the study of mutual aid and its effectiveness in the recovery processes of mental health. It requires new research methodologies that

allow the generation of new elements of evidence to overcome implementation problem.

Conclusions

Despite being recommended in the legislative, scientific, and technical elements of many countries (Patel et al., 2018), community interventions for mental health have had difficulties in their implementation. At this point, the need for methodologies that contribute to biomedical sciences with therapeutic approaches is reaffirmed. This overcome the passive and unilateral role that human beings with mental problems have had in their recovery, to be assumed in an interactive, lateral, and horizontal way (Dell et al., 2021).

In mental health, it is a priority to move from research to practice (Mehta et al., 2021). And to develop methods to ensure that evidence-based strategies and programs are effectively translated and used in the real world (Curran et al., 2012). These practices, methods, and transfers, require specifying nuclear components, in the first place, subsequently, go through an appropriation, to consolidate an effective strategy that achieves positive changes in people's lives.

In this case, it has been found in this review, as core components of mutual aid groups Coping strategies, Recognition and management of emotions, Problem solving, Supportive interaction. As well as, Construction of identity, Social networks, and Active agency. The application of these components has been associated with greater benefits, that should be considered in the implementation of mental health plans, programs, strategies, or policies.

The components of this type of interaction assume that people who have similar experiences can relate better and, consequently, can offer more authentic empathy and validation. Where reciprocity appears as an integral part of this process, unlike the support of expert workers. These differences mean that socioemotional support is frequently accompanied by instrumental support to achieve a desired social or personal change (Repper & Carter, 2011). MAGs offer much potential benefits, but their ability to execute will depend on local realities, including a differentiated approach, displacement to groups, and skills in handling technological tools (Edwards & Imrie, 2008; Gugerty at al. 2019; Powell & Perron, 2010).

These findings represent a contribution to the methodology in the development of the MAG and perhaps other group strategies for mental health. Likewise, it is better oriented towards minimum expected or desirable results, although many of these components may not be differentiated as part of the process or the result. Loreto & Silva (2004) mention:

> The question remains: Where do the processes end and the results begin? We think that this happens due to a difficulty in defining what a process and a result are. Because both are not intrinsically or essentially different, but rather constitute part of a future in which the definition of each one is relative. (p.31)

Similarly, this review also reaffirms that implementation in mental health is more successful when the necessary infrastructure to implement, train, monitor, and evaluation of results are provided. The community is involved in the selection and evaluation of programs and practices. There is a political context that facilitates resources, to let the learning and make necessary adjustments in the implementation process (Fixsen et al., 2018).

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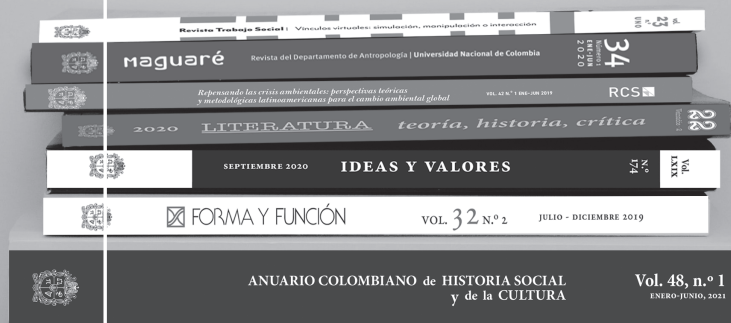
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