

Community resilience and posttraumatic growth in the aftermath of collective disaster and trauma

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Submetido em: 01/05/2020. Aprovado em: 29/07/2020. Publicado em: 13/01/2021.

ABSTRACT

Resilience and posttraumatic growth have aroused a growing interest in recent decades. As the next step in theoretical and applied progression, the stress and coping researchers should attempt to advance conceptual definitions and empirical research on community resilience and posttraumatic growth to adequately evaluate it in different contexts of collective disadvantage. Across two studies, we examined whether community resilience can be used as a potential tool that, by reinforcing in-group interaction, might foster individual posttraumatic growth and social well-being among people affected by collective traumatic events. In a context of collective disaster (community sample of 1075 adults from Argentina and Chile), we found positive and significant correlations of Community Resilience with Individual Resilience, Communal Mastery, Social Integration, and Subjective Wellbeing. Subsequently, we confirmed that collective traumatic experience such as a natural disaster can result in perceptions of benefits not only at personal but also at communal and societal levels. In sum, this research contributes to the study of the sense of togetherness, which can be translated into high community resilience. Also, it represents the attempts to identify the ways to promote community resilience with the purpose of empowering communities and generate sustainable community intervention.

Keywords: Community. Resilience. Posttraumatic growth. Collective disasters.

Resiliência comunitária e crescimento pós-traumático perante desastres naturais e trauma coletivo

RESUMO

A resiliência e o crescimento pós-traumático têm despertado um interesse crescente nas últimas décadas. Como o próximo passo na progressão teórica e aplicada, os pesquisadores de estresse e enfrentamento devem tentar avançar em definições conceituais e pesquisas empíricas sobre resiliência comunitária e crescimento pós-traumático para avaliá-la adequadamente em diferentes contextos de desvantagem coletiva. Em dois estudos, examinamos se a resiliência comunitária pode ser usada como uma ferramenta potencial que, ao reforçar a interação dentro do grupo, poderia fomentar o crescimento individual pós-traumático e o bem-estar social entre as pessoas afetadas por eventos traumáticos coletivos. Em um contexto de desastre coletivo (amostra comunitária de 1075 adultos da Argentina e do Chile), encontramos correlações positivas e significativas de Resiliência Comunitária com Resiliência Individual, Domínio Comunitário, Integração Social e Bem-estar Subjetivo. Posteriormente, confirmamos que a experiência traumática coletiva, como um desastre natural, pode resultar em percepções de benefícios não apenas pessoais, mas também em nível comunitário e social. Em suma, esta pesquisa contribui para o estudo do sentido de união, que pode ser traduzido em alta resiliência comunitária. Também representa as tentativas de identificar as formas de promover a resiliência comunitária com o objetivo de capacitar as comunidades e gerar uma intervenção comunitária sustentável.

Palavras-chave: Comunidade. Resiliência. Crescimento pós-traumático. Catástrofes coletivas.

Resiliencia Comunitaria y Crecimiento postraumático ante desastres naturales y traumas colectivos

RESUMEN

La resiliencia y el crecimiento postraumático han despertado un creciente interés en las últimas décadas. Como siguiente paso en la progresión teórica y aplicada, los investigadores sobre el estrés y el afrontamiento deben tratar de avanzar en las definiciones conceptuales y las investigaciones empíricas sobre la capacidad de recuperación de la comunidad y el crecimiento postraumático para evaluarlo adecuadamente en diferentes contextos de desventaja colectiva. En dos estudios se examinó si la capacidad de recuperación de la comunidad puede utilizarse como una posible herramienta que, al reforzar la interacción dentro del grupo, podría fomentar el crecimiento postraumático individual y el bienestar social de las personas afectadas por acontecimientos traumáticos colectivos. En un contexto de desastre colectivo (muestra comunitaria de 1075 adultos de Argentina y Chile), encontramos correlaciones positivas y significativas de la resiliencia comunitaria con la resiliencia individual, el dominio comunitario, la integración social y el bienestar subjetivo. Posteriormente, confirmamos que la experiencia traumática colectiva, como un desastre natural, puede dar lugar a percepciones de beneficios no sólo a nivel personal sino también comunitario y social. En resumen, esta investigación contribuye al estudio del sentido de unión, que puede traducirse en una alta resistencia de la comunidad. Además, representa los intentos de identificar las formas de promover la capacidad de recuperación de la comunidad con el propósito de empoderar a las comunidades y generar una intervención comunitaria sostenible.

Palabras clave: Comunidad. Resiliencia. Crecimiento postraumático. Desastres colectivos.

INTRODUCTION

The impact of global catastrophes and overly complex emergencies have drawn the attention of different disciplines. It is well documented that economic, political, social and cultural aspects of events of great magnitude generate widespread and long-term consequences (CALHOUN; TEDESCHI, 2010; PATEL *et al.*, 2017; SHARIFI, 2016). A matter of great interest for Community and Social Psychology is to analyse not only its negative impact on communities, groups and individuals, but also the ways in which communities and groups face collective adversity and the process they are involved in to reinforce communal ties and social solidarity. Therefore, studies on Community and Collective Resilience are extremely important (BONANNO *et al.*, 2010; HANBURY; INDART, 2013; NTONTIS *et al.*, 2018) to identify the ways to promote community resilience with the purpose of empowering communities and generate sustainable community intervention.

COLLECTIVE ADVERSITIES

Natural and social disasters are events that affect a community or group, and they have negative consequences for wellbeing and mental health (for example, post-traumatic stress disorder, PTG) (VÁZQUEZ; PÉREZ-SALES; OCHOA, 2014). These events can be both natural and technological; such as, interpersonal violence, wars, and violent social conflicts; and those described in an international context as complex emergencies (HANBURY; INDART, 2013).

On the one hand, in recent decades, communities have increased their level of vulnerability to natural disasters. In 2010, the Haiti earthquake was the deadliest, with more than 220,000 fatalities, while the Chilean earthquake was the costliest, with losses reaching \$ 30 billion. And in the 2011 earthquake in Japan, almost 20,000 people died and damages of 210,000 million dollars were recorded (EM-DAT, 2012).

Research on the psychological consequences of natural disasters has focused on people's reactions, measured from psychopathological indicators such as Post-Traumatic Stress Disorder (PTSD) (CARR *et al.*, 1997; NERIA; NANDI; GALEA, 2008; VÁZQUEZ; PÉREZ-SALES; OCHOA, 2014). However, studies show that there are people who mitigate the effects of the disaster according to their capacity for organization, communication and social support (NTONTIS *et al.*, 2018). These social processes contribute to a decrease in negative and an increase in positive affect, improve positive relationships with others, and reinforce the meaning of life and psychosocial well-being in general (PÁEZ *et al.*, 2011).

On the other hand, among the catastrophes generated by human behaviour is collective violence, which includes war, violent conflicts, different types of terrorism and state violence through different institutional groups (ORGANIZACION..., 2002). However, one form of human-generated disaster that we can identify corresponds to situations of Social Exclusion. Social exclusion is conceived as a multidimensional concept, which is operationalized as a combination of material deprivation, insufficient access to social rights, a low degree of social participation and an absence of normative integration; it is related, sometimes, with material aspects (distributive dimension), but in others, it presents non-material characteristics (relational dimension); in addition, its causes may reside at the collective level, but the individual responses may be equally important according to (JEHOEL-GIJSBERS; VROOMAN, 2007). For Castells (2018, p. 98), it is the "process by which certain individuals and groups are systematically prevented from accessing positions that would allow them an autonomous subsistence within the social levels determined by the institutions and values in a given context...".

However, research has not addressed how people cope with social exclusion at the community level. The present research will address this gap by contributing to identify the facets of community resilience and develop an instrument to its measurement.

COMMUNITY RESILIENCE

The study of resilience in Psychology has focused mainly on resilience as an individual construct (IRAURGI CASTILLO, 2012), emphasizing that protective factors can come from the community, family and individual sphere (BERGSTRÖM; DEKKER, 2014). However, there are fewer approaches that conceive of resilience as a fortress that develops because of social interconnections, when human collectives and communities creatively and actively face the challenges of the environment, be they human, natural or natural catastrophes, collective traumatic events. However, in the last decade interest in the study of CR has increased, and many models and tools for its diagnosis have been suggested (SHARIFI, 2016). There is a consensus about the multi-dimensionality of CR, which is used in various fields and diverse situations to describe and consider the intersection between economic, social and environmental capital (WILSON, 2012), and which operates at different levels, including macro, meso and micro social level (BERGSTRÖM; DEKKER, 2014).

When the stressors that affect groups of people promote adaptive behaviours after natural or social catastrophes, we speak of Community Resilience (CR). Communities can incorporate survival strategies, forms of organization, commitment, bonding and other experiences to establish new social and work ties, adapt and continue with life (URIARTE ARCINIEGA, 2013). From a community perspective, Resilience can be evaluated in terms of resources, economic development, social capital, information and communication, and community competence (SUÁREZ OJEDA, 2007).

It refers to the capacity of the social system and institutions to face adversities and subsequently reorganize themselves in order to improve their functions, structure, and identity (URIARTE ARCINIEGA, 2013); it also involves overcoming disasters and massive situations of adversity and building on them (MELILLO; SUÁREZ OJEDA, 2008). The concept has a Latin American origin and focuses on aspects of coping with trauma and collective conflict. As Melillo and Ojeda (2008) indicate, it is about the collective condition to overcome and build on disasters and situations of adversity; and it would imply a vision of problems as opportunities solvable and that can be faced.

Accordingly, some other authors define CR as the existence, development and commitment of community resources by community members to face an adverse environment (MAGIS, 2010). However, other authors propose broader definitions that encompass both prevention and recovery capacity once adversity has occurred (PLOUGH *et al.*, 2013; TWIGG, 2007; URIARTE ARCINIEGA, 2013). Thus, Twigg defines resilience as the “Capacity of a community to detect and prevent adversities, the capacity to absorb a shocking adversity and the capacity to recover after damage” (TWIGG, 2007, p. 6). Along these same lines, Plough *et al.* (2013) delineate it as the community’s continuous and developing capacity to account for its vulnerabilities and develop capacities that help prevent, resist and mitigate the stress of an incident; recover in a way that restores the community to self-sufficiency and at least the same level of social and health functioning as before the incident; and to use the knowledge acquired to strengthen the community’s capacity in the following incident.

RC DIMENSIONS

According to the background previously exposed, CR is a multidimensional concept within which we can identify three dimensions:

- 1) **Social Wellbeing and Social Capital:** Social well-being integrates social and cultural elements that promote mental health and that are related to the real bases of implicit positive beliefs about the self, the world and others. Social contact, interpersonal relationships, roots and community contacts, as well as social participation increase the well-being of communities. Well-being, in turn, is associated with social capital (KEYES, C. L. M.; SHAPIRO, 2004). That is, the set of resources derived from the network of interpersonal relationships in which the subject participates (PUTNAM, 2001). González-Muzzio (2013) points out the direct relationship between social capital and CR, indicating that communities that actively participate in formal organizations and that have a greater support network are more resilient. At the same time, the study indicates that a stressful event, such as the earthquake in Chile in 2010, favoured the creation of new social capital, as well as the modification of institutional structures and their adaptive or emerging behaviour.
- 2) **Emotional Regulation:** the process of initiating, maintaining, modulating, or changing the occurrence, intensity, or duration of internal affective states and physiological processes in order to achieve a goal (THOMPSON, 1994). Negative emotions such as anger or anxiety negatively influence social relationships (LAZARUS, 1996). For their part, positive emotions seem to broaden people's thinking-action repertoires and favour the construction of lasting personal resources, which in turn can improve their way of coping with a stressful situation (FREDRICKSON, 2001).
- 3) **Collective Efficacy:** The belief of a group to obtain certain achievements together regarding their competencies and capacities (BANDURA, 1997). A resilient community would have adequate mechanisms for the management of group conflicts, care for the environment,

attention to the needs of the population, ability to work as a team for the common good and an attitude of autonomy to manage the community's social services (CARROLL; ROSSON; ZHOU, 2005).

In sum, we can define CR as the process through which a group or community overcomes events and / or conditions of adversity, both natural and socio-political, through the use of effective collective strategies that involve: the regulation of shared emotions (emotional regulation), the availability and use of both material and human resources of the community (well-being and social capital), and the perception of the competence and capacity of the community to face the challenges and obtain certain achievements (collective effectiveness).

However, it should be noted that, despite being a concept of growing interest, both its delimitation and the identification of its attributes are ambiguous due to the multiplicity of existing proposals, which is reflected in the shortage of validated instruments for its operation and measurement.

The aim of this study is to analyze the structure of Community Resilience (CR) construct in two different countries, specifically applying a brief version of de CR scale 12 items. In addition, our objective is to analyze the psychosocial correlates of CR Individual Resilience, Communal Mastery, Subjective well-being (PHI), and Social Integration.

METHOD

PARTICIPANTS

The study was conducted in a community sample of 1075 adults (56.3% women) from Chile and Argentina, aged between 18 to 40 years ($M = 23.99$, $SD = 6.24$). Specifically, the majority of the participants were students and members of their families, both in Chile ($N1 = 353$; 49.1% women; $M = 27.90$, $SD = 7.97$) and in Argentina ($N2 = 722$, 59.8% women; $M = 22.38$; $SD = 4.45$).

PROCEDURE

Questionnaires were administrated via online platform Survey Monkey. Students responded to the questionnaire in the classrooms, and other participants were supervised by trained collaborators. All participants received information about the research project and signed an informed consent form. The study ensured both anonymity and compliance with the Personal Data Protection Act passed by the Research Ethics Committee (University of Santo Tomas, code 186).

VARIABLES AND MEASURES

Community Resilience Scale (ALZUGARAY *et al.*, 2018) was a self-report measure of the perception of community capacities and relations. First, participants were asked to indicate the adversity or situation to which they were exposed, and second, the group which they considered as their community. Subsequently, regarding the above-mentioned situation and group, they were asked to responded a 12 items version of the scale, which consisted of three dimensions: Emotional Regulation (ER; e.g., “During adverse situations, we are attentive to the needs of the members of the community”); Social Capital (SC; e.g. “Our community works with agencies and organizations outside the community to get what they need during an adversity”); and Collective Efficacy (CE, e.g., “Our community is capable of resolving adversity situations on its own, before receiving external help”). Participants scored their answers on a five-point Likert-type scale, ranging from 1 = *strongly disagree* to 7 = *strongly agree*. The reliability indexes for this sample were $\alpha = .744$, $\alpha = .715$, and $\alpha = .823$ respectively, also the general index was adequate $\alpha = .888$.

Individual Resilience (IR, Trait Resilience Scale; MALTBY; DAY; HALL, 2015). We used a 12 item measure of trait resilience derived from three common mechanisms identified in ecological theory: Engineering (e.g., “I am able to recover from stressful events with ease), Ecological (e.g., “I always give all I can, regardless of what may happen”) and Adaptive (EEA) resilience (e.g., “I like coping with unpredictable situations”).

Participants scored on five-point Likert scale ranging from one = *strongly disagree* to five = *strongly agree*. The reliability indexes for this sample were $\alpha = .903$, $\alpha = .804$, and $\alpha = .830$ respectively, and general index was good $\alpha = .871$.

Communal Mastery Scale (CM; HOBFOLL *et al.*, 2002), composed by eight items, is a measure of the extent to which individuals see themselves as able to be effective in achieving their goals and coping with life challenges by virtue of their being attached to significant others on a four-point scale ranging from one = *strongly disagree* to four = *strongly agree*. Examples of items were, e.g., “With the help of those close to me I have more control over my life (referred to people in general)” ; e.g., “Working together with friends and family I can solve many of the problems I have. (Respect to family and friends)”. Internal reliability index was acceptable $\alpha = .779$.

Remembered well-being (RWB-PHI, HERVÁS; VÁZQUEZ, 2013) was evaluated by 11-item, divided in four facets: General (two items; e.g., “I am very satisfied with my life”), eudemonic (six items; e.g., “I feel able to solve the majority of my daily problems”), hedonic (two items; e.g., “I enjoy a lot of little things every day”) and social (1 item; e.g., “I think that I live in a society that lets me fully realize my potential”). Responses ranged on a scale from zero = *strongly disagree* to ten = *strongly agree*. Internal reliability index was acceptable $\alpha = .880$.

Social Well-being - Social Integration (SWB, KEYES, 1998; adapted by BOBOWIK; BASABE; PÁEZ, 2015). We used three items to assess social integration (e.g., “I feel close to other people in my community”). Participants were asked to evaluate their levels of agreement with each sentence on a five-point scale, ranging from one = *strongly disagree* to five = *strongly agree*. Internal reliability index was acceptable $\alpha = .709$.

Table 1 – descriptive statistics, reliability and correlations

	M(SD)	A	1.	2.	3.	4.	5.	6.	7.	8.
Community Resilience	3.03(.69)	.888	--							
Emotional Regulation	3.25(.75)	.744	.87**	--						
Social Capital	3.00(.76)	.715	.87**	.64**	--					
Collective Efficacy	2.85(.83)	.823	.89**	.67**	.66**	--				
Individual Resilience	3.59(.64)	.871	.28**	.26**	.19**	.28**	--			
Communal Mastery	3.10(.44)	.779	.21**	.20**	.18**	.17**	.31**	--		
Subjective Wellbeing	7.51(1.52)	.880	.19**	.19**	.13**	.17**	.27**	.26**	--	
Social Integration	3.62(.65)	.709	.37*	.37**	.32**	.29**	.19**	.34**	.18**	--

Note. CR = Community Resilience; ER = Emotional Regulation; SC = Social Capital; CE = Collective Efficacy; PHI = Subjective Well-being; total N = 1075 *, $p < .05$ **, $p < .01$.

Source: Author's elaboration (2020)

RESULTS

DESCRIPTIVE STATISTICS AND RELIABILITY ESTIMATES

Adversities and communities

The adversities mentioned by participants were general and political violence (46.1%); disasters caused by natural threats (15.7%); economic crisis (14.4%); disasters caused by human behaviour (14.4%) and others (diseases and accidents 15.5%). The communities chosen to face these adversities were neighbourhood (48.2%); city (30%); commune (15.6%); and others (family and friends, 5.9%).

CR AND CORRELATES

Mean scores of all variables were placed around the mid-point of the scale, and the mean of EC score was a little lower. CR12 total score correlated positively and significantly with their three dimensions; specially was higher in the case of ER. There were positive and significant correlations between CR and Individual Resilience, Communal Mastery, Subjective well-being (PHI), and Social Integration (see Table 1).

DISCUSSION AND CONCLUSIONS

Our interest is focused on community resilience at a meso level of the communities and primary groups (neighbourhood, families and peer groups). However, there are hardly any measurement scales that allow measuring members' perception of the community's ability to respond resiliently. Assuming this perspective, we consider that this study provides a proposal for the conceptualization and evaluation of community resilience that is necessary and that comes to fill an important gap in the study of the role of resilient communities in the face of collective challenges. A multidimensional construct of community resilience is proposed to evaluate the perception of the response capacities of the community by its members. Community resilience was grouped into three large dimensions consisting of Emotional Regulation, Social Capital and Well-being and Collective Efficacy.

Regarding the psychosocial correlates and possible effects of community resilience, at the micro and individual level, it was associated with subjective well-being indicators, showing that resilient communities can contribute to the well-being of their members, their satisfaction with life, positive affect and eudaimonic well-being, which implies the development of individual strengths; providing meaning to life, self-acceptance, personal growth, positive relationships with others and self-competition (HERVÁS; VÁZQUEZ, 2013). The latter are the components that Ryff and Keyes (1995) defined as psychological well-being.

Likewise, we found that community resilience was associated with social integration (KEYES, 1998), specifically the item on the PHI scale of subjective well-being which included this aspect (“*Living in a society that promotes optimal psychological functioning*”). Similarly, it is verified that resilient communities are also communities that promote the social integration of their members, as well as the communal domain, that is, the perception of personal efficacy for being interconnected and having the social support of others.

In sum, on the one hand, it is verified that the correlates of CR provide members of the community with protective elements to face adversity, such as social support, self-efficacy, regulation of stress and affect (BONANNO; WESTPHAL; MANCINI, 2011; IRAURGI CASTILLO, 2012; LEE *et al.*, 2013; MASTEN, 2004). On the other hand, CR promotes socially healthy communities because they develop forms of commitment, bonding, and social ties between people (URIARTE ARCINIEGA, 2013).

In conclusion, this work constitutes a first proposal for the delimitation and evaluation of the CR construct. Along with previous studies, this proposal has limitations regarding its cross-sectional nature, use of convenience samples, the limited type of adversities studied and the type of primary and community groups to which the CR measure

focuses. However, despite these limitations, we hope to have contributed to the progress in the study of CR. This study provides evidence on the validity of CR content from the perspective of the members of a community at a meso-social level, which may allow the integration of communities as a source of psychosocial strengths, placing vulnerable people in their context and recognizing strengths and protective factors.

As recommendation for community interventions at the light of this study it is important to enhance a sense of community, sharing a social identity and cohesion between its members through the regulated expression of collective emotions, being aware of the common adversities. Recognizing the strengths to cope efficiently and being prepared to prevent futures threats.

This line of research can contribute to the development of a Positive Community Psychology, focused on the community and that provides tools in an applied aspect to plan effective community interventions based on empirical evidences.

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ACKNOWLEDGMENTS

We wish to express our deepest appreciation to all participants.

FUNDINGS

This research was supported by the Spanish Ministry of the Economy and Competitiveness [under Grants PSI2014-51923-P / PSI2017-84145-P], the Basque Government [under Grant IT-1187-19], and FONDECYT Iniciación 11190980 granted to Anna Włodarczyk.