Coping and resilience are differently related depending on the population: A comparison between three clinical samples and the general population.

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Coping and resilience are differently related depending on the population: a comparison between three clinical samples and the general population.

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Abstract

Different stressors trigger different coping strategies and resilience also varies across adversities. This study aimed to investigate the association between coping strategies and resilience outcomes in different stressful situations. Individuals living with HIV, with cancer, have children with cancer, or from the general population ($N = 525$) completed measures of resilience (the *Brief Resilience Scale*) and coping (the *Situated Coping Questionnaire for Adults*). We examined differences in resilience and in the use of coping strategies across samples with ANOVAs. We obtained high- and low-resilience groups for each sample and conducted ANOVAs to study differences in coping strategies. Result showed that resilience was similar across samples, but differences emerged regarding coping strategies (e.g., HIV+ individuals were more likely to use emotional expression and isolation and less likely to seek help). HIV+ high- and low-resilience groups used every strategy differently, except for problem-solving and thinking-avoidance. Cancer high- and low-resilience groups differed only in rumination. Parents of children with cancer differed in rumination, self-blame, isolation, and positive thinking. General population groups differed in all strategies but help-seeking. In conclusion, different strategies were associated with resilience for each sample, interventions tailored for specific problems should therefore be implemented.

   Keywords: coping strategies; resilience; stress; HIV; cancer

Coping and resilience are differently related depending on the population: a comparison between three clinical samples and the general population.

Most adults endure at least one adverse event throughout their lifespan, after which, some are unable to function normally. Consequently, research has focused on the negative psychological outcomes of such potentially traumatic events, including anxiety, depression, or posttraumatic stress disorder (Bonanno, 2005; Zautra, Hall, & Murray, 2010). However, there is now interest among researchers in the positive outcomes that have been found after experiencing highly stressful circumstances, as in the case of resilience.

Resilience has usually been understood has absence of psychopathology, but as many authors advise, we need definitions that go beyond the absence of problems (e.g., Zautra et al., 2010). Resilience can be defined as a positive adaptation despite experiences of significant adversity or trauma (Luthar, 2006), and it involves rapidly bouncing back to pre-stress levels of functioning and maintaining a stable equilibrium (Bonanno, 2005; Smith et al., 2008). Resilience has been conceptualized in many ways—as a personality trait, a process, and an outcome—but the characteristics of a person and a situation may be described as resilient traits or processes only if they actually lead to positive adaptation. Because of this, some researchers agree that resilience is best defined as an outcome of successful adaptation to adversity rather than as a trait or process (Leipold & Greve, 2009; Zautra et al., 2010).

As an outcome, resilience is a matter of degree—an individual can show a lower or greater degree of resilience. Moreover, resilience depends on the adverse event; that is, people can show a degree of resilience in the face of one kind of adversity, and a different degree in the face of others (Luthar, 2006; Reaching in… Reaching out, 2010). For instance, the degree of resilience in the face of HIV infection shown by an individual could be different from the degree of

resilience shown by the same individual in the face of pediatric cancer of their child. Moreover,

resilience in the face of different adversities may be explained in different ways; therefore, the

exploration of its underlying processes should consider the effect of the type of adversity.

Researchers have stressed the importance of identifying the psychological processes that

underlie resilience (De Santis, Florom-Smith, Vermeesch, Barroso, & DeLeon, 2013; Leipold &

Greve, 2009). Many authors agree on the key role that coping strategies play in explaining the

degree of resilience (Folkman & Moskowitz, 2004; Pellowski, Kalichman, Matthews, & Adler,

2013; Zautra et al., 2010). Coping is a process that involves constant changes in cognitive and

behavioral efforts aimed at dealing with a situation or condition appraised as exceeding personal

resources (Lazarus & Folkman, 1984).

Like resilience, coping effectiveness has been shown to depend on the specific stressor

(Folkman & Moskowitz, 2004; Moskowitz, Hult, Bussolari, & Acree, 2009; Moskowitz &

Wrubel, 2005). Different stressors have different causes that in turn lead to different causal

attributions (e.g., in HIV infection, the person is generally held responsible for contracting the

virus, while that is generally not the case when a child develops cancer). The use of certain

coping strategies is influenced by the causal attributions one makes—for instance, internal

attributions tend to increase the use of self-blame, but they also can imply a certain sense of

control over the stressor. Coping strategies, in turn, lead to different mental health outcomes

(Roesch & Weiner, 2001).

A recent meta-analysis on coping measures (Kato, 2015) showed that active coping,

positive reinterpretation, seeking social support, and acceptance were associated with well-being,

while rumination, emotional venting, self-blame, and behavioral disengagement were related to

psychological distress. However, it included no information regarding its relationship with

resilience or possible differences among populations facing different stressors. Other studies

have established some links between coping and resilience in various populations (Alonso-Tapia,

Rodríguez-Rey, Garrido-Hernansaiz, Ruiz, & Nieto, 2016; Molina et al., 2014; Pellowski et al.,

2013), but the dearth of research in this respect calls for further quantitative investigations. Such

studies should use a systematic definition of resilience and apply the same measure across

populations faced with different stressors to make data comparable, thereby elucidating the

possible differences in resilience and resilience-related coping effectiveness.

Having a health-related condition such as HIV infection or cancer may constitute a very

important source of stress, as well has having a child with cancer (Molina et al., 2014;

Moskowitz et al., 2009; Vrijmoet-Wiersma et al., 2008). Promoting resilience has been

conceived as a critical element of psychosocial care in these three populations (Earnshaw,

Bogart, Dovidio, & Williams, 2013; Molina et al., 2014; Rosenberg, Baker, Syrjala, Back, &

Wolfe, 2013). Consequently, research should investigate whether there are differences in the

coping strategies that are associated with better resilience outcomes for each of these populations

and the general population as well.

Some studies in these specific populations have reported on the effectiveness of coping in

relation to resilience, but did not provide comparable data. For instance, in HIV-infected

individuals, positive cognitive appraisal, active coping and positive reframing have been

positively associated with resilience (Fumaz et al., 2015; Stewart & Yuen, 2011). Among cancer

survivors, approach coping predicted higher vitality and lower depressive symptoms (Kraemer,

Stanton, Meyerowitz, Rowland, & Ganz, 2011), although resilience was not specifically

measured. Lastly, in parents of children with cancer, lower resilience resources were associated

with negative outcomes such as higher distress, lower social support, lower family function, or

higher odds of frequent sleep difficulties (Rosenberg et al., 2014). We underscore here again the need to use across populations a stable conceptualization and measurement of resilience so that we can learn about the potential differences among adversity types and contribute to our understanding of how to better promote resilient outcomes for each kind of stressor.

The objective of this study was to examine: 1) whether there were differences in the degree of resilience shown by general population adults, cancer patients, HIV-infected individuals, and parents of children with cancer; 2) whether there were differences in the degree to which coping strategies were used by each population; and 3) whether higher resilience was related to different coping strategies depending on the population.

Methods

Participants

Participants from four different clinical and non-clinical populations were recruited: general population adults ($n = 319$), adults living with HIV ($n = 114$), adults living with cancer ($n = 23$), and parents of children with cancer ($n = 69$).

Instruments

Demographic Characteristics included gender, age, educational level, employment status and relationship status.

Coping strategies were assessed using the Situated Coping Questionnaire for Adults (SCQA) (Alonso-Tapia et al., 2016), a Spanish-language measure assessing the use of eight different coping strategies: problem solving, help seeking, positive thinking, rumination, emotional expression, isolation, self-blame, and thinking avoidance. Respondents rated items on a 5-point Likert scale to assess to which degree they had used each coping strategy in the previous six months (1 = Never, 5 = Almost always). Higher scores indicate higher use of the

strategy. Reliability of the coping strategies' scores was shown to be good in the original study (McDonald's ω ranging from .90–.94). Cronbach's α ranged .71–.86 in the current sample.

Resilience was measured with the Brief Resilience Scale (BRS) (Smith et al., 2008), a 6-item self-report instrument with a 5-point response scale (1 = Strongly disagree, 5 = Strongly agree). The possible scores range 6–30 and a higher score indicates a higher degree of resilience. This scale has been recommended on the basis of its psychometric properties in a recent review of 15 resilience measures (Windle, Bennett, & Noyes, 2011) and because it measures resilience as an outcome (Zautra et al., 2010). The Spanish version was used in this study (Rodríguez-Rey, Alonso-Tapia, & Hernansaiz-Garrido, 2016). The BRS showed good internal consistency in the Spanish validation study (α = .83) and in our sample (α = .86).

Procedures

Approval for this study was obtained from the institutional review board at the third author's university. General population data were collected by email using a snowball approach in which students and University workers were asked for collaboration to spread an invitation to participate among their acquaintances. Clinical samples data were collected by contacting non-profit organizations and asking them to share information about the study and a link to the informed consent and the questionnaires. Those willing to participate completed the questionnaires online. All participants completed all items, so there were no missing data.

Data analysis

Descriptive univariate statistics of the sample were obtained, consisting of frequencies and percentages. Analyses of variance (ANOVAs) were performed to test mean differences in resilience and coping strategies by type of population. Post-hoc Bonferroni was employed when

Levene's test of homogeneity of variances was non-significant; otherwise Games-Howell was used.

The sample was then divided in two by the mean score on resilience, creating a high-resilience group and a low-resilience group. The mean was used as an estimate of central tendency after checking that there were no outliers and that the mean and the 5% trimmed mean were the same ($M = 17.90$). We then performed independent samples t-tests to investigate differences in the use of coping strategies between high-resilience individuals and low-resilience ones. These t-tests were conducted separately for each of the population samples (i.e., general population, HIV, cancer, and parents of children with cancer). All analyses were performed with SPSS 23.

Results

Sample descriptive analyses

The total sample was composed of 525 adults, with 64.0% of women. Over a third of participants (35.4%) were aged 20-30, 23.2% were 31-40, a quarter (25.1%) were 41-50, 13.3% were 51-60, and 2.9% were aged 61 or older. As for educational level, 5.5% had completed primary education, 14.7% had secondary education, 9.1% had received professional education, more than half (53.3%) had an undergraduate degree and 17.3% had a graduate degree. Slightly over half of the sample was married or living with their partner (51.2%) and most of the rest were single (41.3%). Some participants were separated or divorced (5.9%) and a small proportion were widowed (1.5%). The majority were employed (62.9%), although almost one in five was unemployed (18.5%). The rest were students (13.9%) or had retired (4.8%).

Degree of resilience and use of coping strategies by type of population

ANOVAs were performed to examine differences across populations in the use of coping strategies and the degree of resilience. Table 1 shows the means and standard deviations of the scores on resilience and each of the eight coping strategies for each type of population, along with the results of the ANOVAs. As it can be seen, there was no difference in the mean degree of resilience shown by each population. Where coping strategies are concerned, a significant mean difference was found for help-seeking, positive thinking, emotional expression and isolation. Post-hoc tests showed that HIV+ participants were significantly less likely to seek help than the ones in the general population, and they were significantly more likely to express their emotions than cancer patients and the general population. HIV+ participants also tended to isolate themselves more than the rest, and cancer patients were significantly less likely to isolate themselves than general population adults. Post-hoc analyses showed no significant differences for positive thinking, despite the significant ANOVA. No differences emerged across the types of populations for problem-solving, rumination, thinking-avoidance, and self-blame, though the latter was close to the significance level ($p = .051$).

[INSERT TABLE 1]

Use of coping strategies by resilience group and type of population

The sample was divided into two groups by the mean score on resilience ($M = 17.90$), resulting in a group of low-resilience participants ($n = 239$) and a group of high-resilience participants ($n = 286$). The t-tests were then conducted in each type of population to examine whether the high-resilience group used coping strategies differently from the low-resilience group. The results of these analyses are depicted in Table 2, along with the mean score on each coping strategy for each resilience group in each population subsample.

[INSERT TABLE 2]

Within the general population subsample, high-resilience individuals tended to use more problem-solving, positive thinking and thinking-avoidance than the low-resilience group, and less rumination, emotional expression, isolation and self-blame. Both groups used help-seeking equally. Regarding the HIV+ adults subsample, those in the high-resilience group were significantly more likely to seek help and think positively than those in the low-resilience group, and significantly less likely to ruminate, express their emotions, isolate themselves or blame themselves. No differences between groups were found for problem solving and thinking avoidance.

In relation to cancer patients, the only significant difference between the high- and the low-resilience groups was in rumination, with those in the former group being significantly less likely to ruminate. A difference in self-blame was near the significance level ($p = .07$), with low-resilience participants tending to use this strategy more. Lastly, concerning parents of children with cancer, those in the high-resilience group were significantly more likely to think positively and less likely to ruminate, isolate themselves or blame themselves than their low-resilience counterparts. Two differences were near the significance level: emotional expression, with those in the high-resilience group tending to use it less ($p = .055$), and thinking-avoidance, with those in the high-resilience group tending to use it more ($p = .069$). No differences emerged for problem-solving and help-seeking.

Discussion

This study sought to examine the differences in the use of certain coping strategies across several populations and their relationship to resilience. In relation to these aims, the results have shown that different populations show a similar degree of resilience on average. However, they use coping strategies in a different way—people living with HIV tend to use more emotional

expression and isolation and to seek less help than other individuals, and cancer patients tend to isolate themselves less than the general population. This is congruent with Lazarus and Folkman (1984) and more recently by Folkman and Moskowitz (2004), who found that coping is dependent on the specific environmental demands, e.g., the type of stressor.

This result is even more significant when considered together with the finding that different coping strategies are associated with high resilience depending on the type of population. Rumination was associated with lower resilience in all subsamples, a result in line with previous research (e.g., Kato, 2015; Moskowitz et al., 2009), but the remaining strategies had different relationships with resilience depending on the type of population, which is consistent with the notion that coping strategies have different effectiveness depending on the stressor (Moskowitz et al., 2009; Moskowitz & Wrubel, 2005; Roesch & Weiner, 2001). Positive thinking tended to be associated with higher resilience, but only for parents of children with cancer. Emotional expression, isolation and self-blame tended to be associated with lower resilience, but there were certain populations in which that was not the case. Lastly, problem-solving and thinking-avoidance were associated with higher resilience only among general population adults, and help-seeking was associated with higher resilience only in the case of adults living with HIV.

According to these findings, interventions aimed at improving resilience could benefit from formally including coping skills training in their design (Molina et al., 2014). A study that tested the effects of a resilience intervention, which included coping strategies as a key element, showed that the experimental group had higher resilience post-intervention than the waiting list control group (Steinhardt & Dolbier, 2008). However, interventions also need to pay attention to types of problems and should assess the degree of use of each coping strategy. Psychologists and

other mental health professionals need to encourage the use of those coping strategies that are

most adequate for fostering resilience to a particular type of problem—for instance, interventions

with cancer patients should focus on reducing rumination, while interventions with parents of

children with cancer should also reduce isolation and self-blame and increase positive thinking.

      Additionally, the finding that increased help-seeking and low levels of emotional

expression and isolation may lead to higher resilience among adults living with HIV has direct

implications for intervention design when combined with the finding that these individuals are

less likely to seek help and more likely to express their emotions and isolate themselves.

Healthcare providers should foster help-seeking behaviors and discourage isolation and

excessive emotional expression in people living with HIV.

      Concerning this clinical sample, HIV+ individuals have stood out in our study as the ones

with the most different pattern of coping strategies use. Building on the idea that different

medical conditions have different causes that lead to different causal attributions, coping, and

mental health outcomes (Roesch & Weiner, 2001), we argue that the differences found in this

study may be due to the social stigma that surrounds HIV infection, which is based on the means

of acquisition and the negative views that are associated with them (Brouard & Wills, 2006).

Indeed, literature has shown that HIV stigma can alter coping behaviors in people living with

HIV (Hatzenbuehler, Phelan, & Link, 2013; Rueda et al., 2012). Moreover, other chronic

illnesses recruit whole families into them (Zautra et al., 2010), making social support available to

patients. HIV stigma, however, causes people living with HIV to experience lack of social

support (Su et al., 2013), which is consistent with the low use of help seeking and high degree of

isolation found in our data. Research should investigate the specific ways in which stigma has an

influence on coping behaviors and, ultimately, on the achievement of resilience outcomes.

Although our work has made a valuable contribution, some limitations need to be taken into account. Firstly, the online data collection method may have resulted in a biased sample (e.g., highly educated participants), as only those with access to and knowledge about computers, e-mails and web-browsing were able to access the study. Moreover, the recruitment strategy yielded unequal sample sizes, which limits reliability of the findings. Future research needs to address this limitation by securing bigger samples. Secondly, our results are based on cross-sectional data, and so the hypothesis that coping strategies lead to resilience in a particular way depending on the type of population needs to be tested through longitudinal or experimental designs before causality claims can be made. Thirdly, some important sociodemographic and medical variables (e.g., family income, cancer type and stage…) were not assessed due to a conscious effort to reduce participant response burden (Folkman & Moskowitz, 2004; Moskowitz et al., 2009), but this weakens the ability of the study to examine how these variables explain resilience and coping differences. Fourthly, there are other possible coping strategies besides the ones included in the SCQA that might be of interest to the study of coping and resilience, which should be included in future research. Likewise, other populations face different stressors, and research should also examine how coping and resilience operate within these. This is the first study to compare relationships between coping and resilience across different samples; therefore, the differences found in our sample are far from being established. Further research is necessary to replicate and expand these findings.

In conclusion, certain coping strategies tend to be more or less used depending on the type of stressor people face. Moreover, the effectiveness of such coping strategies in terms of resilience outcomes varies from population to population, it is therefore of great importance that researchers and mental healthcare providers take this into account, systematically studying and

comparing different populations in the case of researchers, and tailoring mental health promotion

interventions to the specific type of stressor in the case of healthcare providers.

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Table 1.

Descriptive statistics and ANOVA of resilience and coping variables by population samples.

	Mean (*SD*)				ANOVA	
	General population	HIV	Cancer	Parents of children with cancer	*F*[3,524]	*p*
Resilience	17.84 (5.28)	18.89 (5.80)	17.43 (5.43)	16.68 (5.89)	2.432	.064
Problem-solving	18.87 (3.64)	19.65 (3.63)	19.35 (2.74)	18.57 (3.49)	1.786	.149
Help-seeking	18.55 (4.33) [a]	16.74 (4.56) [b]	19.17 (3.82) [ab]	17.70 (4.14) [ab]	5.580	.001
Positive thinking	18.92 (4.21)	19.91 (4.46)	18.74 (3.76)	20.26 (3.86)	2.989	.031
Rumination	17.15 (3.72)	16.88 (4.31)	16.61 (3.51)	16.75 (4.11)	.368	.776
Emotional expression	11.95 (3.89) [a]	13.68 (4.73) [b]	11.48 (2.91) [a]	12.29 (4.18) [ab]	5.430	.001
Isolation	11.50 (4.44) [a]	13.58 (5.29) [b]	9.22 (3.68) [c]	11.26 (4.41) [ac]	8.853	< .001
Self-blame	14.09 (4.38)	14.41 (5.71)	12.74 (3.88)	12.68 (4.72)	2.604	.051
Thinking-avoidance	16.08 (4.02)	16.11 (4.22)	14.52 (3.85)	15.48 (4.55)	1.389	.245

Note. Population samples (HIV, cancer, etc.) with a different superscript letter show a significant mean difference between them. *SD* = Standard deviation.

Table 2.

Means and t-*tests of coping by population samples and high- and low-resilience groups.*

		General population	HIV	Cancer	Parents of children with cancer
Problem-solving	LR	18.16	19.11	18.67	18.16
	HR	19.47	20.01	19.79	19.06
	t (*p*)	**3.264 (.001)**	-1.313 (.192)	-.960 (.348)	-1.074 (287)
Help-seeking	LR	18.74	15.00	18.33	16.97
	HR	18.40	17.91	19.71	18.58
	t (*p*)	.699 (.485)	**-3.505 (.001)**	-.840 (.410)	-1.577 (.121)
Positive thinking	LR	17.29	16.96	17.56	18.66
	HR	20.30	21.91	19.50	22.23
	t (*p*)	**-6.643 (< .001)**	**-6.417 (< .001)**	-1.225 (.234)	**-4.272 (< .001)**
Rumination	LR	18.79	19.85	18.44	18.79
	HR	15.77	14.87	15.43	14.26
	t (*p*)	**7.860 (< .001)**	**7.327 (< .001)**	**2.173 (.041)**	**5.431 (< .001)**
Emotional expression	LR	13.21	15.87	12.44	13.16
	HR	10.88	12.21	10.86	11.23
	t (*p*)	**5.444 (< .001)**	**4.368 (< .001)**	1.298 (.208)	1.950 (.055)
Isolation	LR	12.05	16.80	9.78	12.95
	HR	11.03	11.40	8.86	9.19
	t (*p*)	**2.041 (.042)**	**6.176 (< .001)**	.577 (.570)	**3.865 (< .001)**

Self-blame	LR	15.53	18.26	14.56	15.05
	HR	12.87	11.81	11.57	9.77
	t (p)	**5.674 (< .001)**	**7.095 (< .001)**	1.907 (.070)	**5.532 (< .001)**
Thinking-	LR	15.33	15.61	14.56	14.58
avoidance	HR	16.72	16.46	14.50	16.58
	t (p)	**-3.126 (.002)**	-1.052 (.295)	.033 (.974)	-1.849 (.069)

Note. Significant *t*-tests ($p < .05$) are highlighted in boldface. LR = low resilience group. HR = high resilience group. p = level of significance.