Interpersonal Violence and Mental Health Outcomes: Mediation by Self-Efficacy and Coping

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Interpersonal Violence and Mental Health Outcomes: Mediation by Self-efficacy and Coping

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Abstract

There is a compelling need to explore the mechanisms linking violence to mental health. This study tested the mediating role of self-efficacy and coping in the association between victimization and mental health. Data were obtained from 422 adults (aged 18-77; M = 30.05; SD = 10.93). Self-efficacy and maladaptive coping strategies mediated the association between physical victimization and anxiety, and the association between psychological victimization and satisfaction with life anxiety and depression. Self-efficacy and adaptive coping also mediated the association between psychological victimization and satisfaction with life. This study provides important implications for research and practice.

Keywords

Victimization, mental health, self-efficacy, coping, quantitative study

Introduction

Adverse effects of interpersonal violence on mental health have been extensively documented (Clements & Ogle; Dworkin et al.). The literature points out the particularly negative effect of polyvictimization (Elliott et al.; Sabina & Straus), indicating that the co-occurrence of physical and psychological victimization has the strongest impact on mental health outcomes, particularly depression and anxiety (Calvete et al.). An analysis of the differential effects of victimization subtypes suggests that psychological victimization better predicts anxiety symptoms in victims of intimate partner violence than does physical victimization (Dutton et al.; also see Lagdon et al.). Sexual assault victimization also predicts greater psychopathology (e.g., depression, anxiety), and shows stronger associations with anxiety (e.g., posttraumatic stress; Dworkin et al.). Women are more likely to be victims of violence than are men (e.g., sexual violence; Kelley et al.; Pimlott-Kubiak & Cortina), but it is unclear if female victims of interpersonal violence are more vulnerable to psychopathology than male victims (Breslau et al.; Pimlott-Kubiak & Cortina).

The primary focus of research on victimization has been on psychopathology as an outcome of violence, with little attention to its effects on well-being. However, mental health is more than a mere absence of psychopathology (Keyes,); and measures of well-being and psychopathology have been shown to be independent but related factors (e.g., Keyes,; Magalhães & Calheiros,). Examining well-being in victims of interpersonal violence has several benefits. Most notably, higher levels of well-being are associated with positive physical health outcomes and longevity, better functioning in the workplace and academic settings, and more positive relationships (Howell et al.). Further, the success of mental illness interventions may be capitalized by the promotion of well-being (Howell et al.), highlighting the need for a more holistic approach to mental health policies and interventions. A more comprehensive understanding of the effects of victimization can be gained by including indicators of well-being (e.g., satisfaction with life; Ryan & Deci) and psychopathology in the same analytic model. However, with few exceptions (e.g., Hamby et al.), the impact of victimization on mental health outcomes has not been systematically explored while simultaneously considering indicators of psychopathology and well-being in the same study. In the present study, mental health is conceptualized as including both positive (well-being) and negative (psychopathology) outcomes (Westerhof & Keyes).
Finally, there is a compelling need to understand how victimization impacts mental health by exploring the mechanisms linking violence to psychopathology and well-being. (Grych et al.) introduced an integrative framework, the Resilience Portfolio Model, that describes a set of protective factors proposed to explain adaptive and maladaptive outcomes in victims of violence. A key process in the model involves the effect of individual assets (e.g., self-efficacy) on coping behavior, which in turn is proposed to affect psychological health (Grych et al.). However, the hypothesis that self-efficacy and effective coping mediate those associations has not been tested.

Self-efficacy beliefs and coping strategies: what role do they play?
Coping strategies refer to what people do to respond to stressful life experiences (Folkman & Lazarus,; Lazarus), and vary in their effectiveness. Maladaptive strategies may involve avoiding the problem (e.g., substance use, avoidant behaviors) and adaptive strategies include efforts to directly address the problem and to seek support from others (Hughto et al.). Maladaptive coping strategies adopted by victims of interpersonal violence are associated with higher levels of depression (Clements et al.) and post-traumatic stress disorder (Krause et al.). For example, emotion-focused coping strategies tend to be related to more psychological difficulties and problem-focused strategies to lower levels of psychopathology (Clements & Sawhney). Several studies have shown that avoidant coping (e.g., denial and behavioral distractions) predicts greater PTSD symptoms, both cross-sectionally (Dunmore et al.) and longitudinally (Krause et al.), and depression in victims of violence (Hughto et al.).

Identifying factors that predict the use of adaptive versus maladaptive coping behaviors is needed to better understand health outcomes in victims of abuse and violence (Grych et al.; Lazarus & Folkman). One particularly important factor may be self-efficacy. Human agency derives from a strong sense of personal efficacy, and individuals' beliefs about their ability to plan, organize and manage different challenges in life may guide their coping behavior (Bandura,; Masten et al.). Self-efficacy beliefs are influenced by mastery experiences (i.e., previous success positively affects self-efficacy beliefs), vicarious experiences (i.e., positive social role models are associated with adaptive self-efficacy beliefs), social persuasion (i.e., people who are persuaded about their abilities tend to invest more efforts in pursuit of their goals) and emotional states (i.e., mood influences the ability of people think about their self-efficacy) (Bandura, ). Supportive and warm relationships with significant others appear to play a positive role in developing self-efficacy while being victimized threatens "people's general positive assumptions of themselves and the world and other" (Janoff-Bulman, 1985, as cited in Mikkelsen & Einarsen, p. 398). Research indicates that greater victimization is associated with lower levels of self-efficacy beliefs during adolescence (Kokkinos & Kipritsi) and adulthood (Albaugh & Nauta). Also, evidence suggests that self-efficacy beliefs might vary significantly by gender, with women scoring lower than men (Scholz et al.).

Further, a set of cognitive, emotional and motivational mechanisms is involved in efficacy-activated processes (Benight & Bandura). Higher levels of self-efficacy are associated with the ability to: a) anticipate positive scenarios and effectively process information (Cognitive Processes), b) mobilize resources needed to make decisions and achieve goals (Motivational Processes), c) exercise control over stressors and regulate emotional responses (Affective Processes) (Bandura). As such, higher levels of self-efficacy thus may be associated with more active and problem-solving coping strategies that promote well-being, whereas lower self-efficacy beliefs may be more closely associated with avoidant
strategies that undermine healthy functioning (Benight & Bandura). Moreover, the literature suggests that women and men might differ on the coping strategies they prefer to use, with women tending to seek emotional support and use positive self-talk strategies more than men, and men tending to use more avoidant strategies when facing, for instance, relationship stressors (Tamres et al.).

(Calvete et al.) investigated the mediating and moderating role of coping on the relationship between violence and psychological symptoms and found evidence of mediation but not moderation. Specifically, the authors found that (a) different types of victimization are differently associated with coping strategies, with psychological abuse predicting greater disengagement (e.g., avoidance and denial strategies) and primary control coping (e.g., emotion regulation, problem solving), and physical abuse predicting lower primary control coping; and (b) there is an indirect relationship between psychological abuse and distress mediated by disengagement coping (Calvete et al.). These studies have begun to document associations among victimization, coping, and adjustment, but further research is needed to understand the pathways linking particular types of victimization experiences, specific coping strategies, and mental health outcomes. In particular, multidimensional approaches to assessing all three constructs are needed; the existing literature focuses mainly on psychopathology rather than well-being and on measuring a narrow range of coping strategies and types of victimization (Breiding et al.). The present study is based on the theoretical assumption that individuals are agents of change and adaptation (Benight & Bandura) as well as on previous evidence and theoretical assumptions about the mediating role of coping (Calvete et al.; Grych et al.). We aim to test a pathway in which adults' self-efficacy and coping efforts mediate the relationship between victimization experiences and mental health outcomes, including both psychopathology and well-being. We propose that greater victimization experiences will be associated with lower levels of self-efficacy, lower self-efficacy beliefs will be related to maladaptive coping, and maladaptive coping will be associated with poorer mental health.

**Method**

**Participants**

A sample of 422 Portuguese adults, aged from 18 to 77 years old ($M = 30.05; SD = 10.93$), completed a set of self-report questionnaires. Most were female (85%), single (72.3%), involved in an intimate relationship with cohabitation (37.4%), and had completed an undergraduate course (38.9%) (Table 1). Analyzing the prevalence of victimization experiences during the last year, we found that 41% did not report any victimization experience, 49% reported one type of victimization and 10% reported two or three. Specifically, 56.4% of our participants reported at least one experience of psychological victimization, 8.8% reported physical victimization and 5.7% reported sexual victimization.

<table>
<thead>
<tr>
<th>Table 1. Sample characteristics</th>
<th>N (%)</th>
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<tbody>
<tr>
<td>Gender</td>
<td></td>
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<tr>
<td>Female</td>
<td>357 (84.6)</td>
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<tr>
<td>Male</td>
<td>65 (15.4)</td>
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<tr>
<td>Marital status</td>
<td></td>
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<tr>
<td>Single</td>
<td>305 (72.3)</td>
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<tr>
<td>Married</td>
<td>92 (21.8)</td>
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<td></td>
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<tr>
<td>Divorced</td>
<td>23 (5.5)</td>
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<tr>
<td>Widowed</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>Intimate relationship</td>
<td></td>
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<tr>
<td>Intimate relationship without cohabitation</td>
<td>139 (32.9)</td>
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<tr>
<td>Intimate relationship with cohabitation</td>
<td>158 (37.4)</td>
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<tr>
<td>Without intimate relationship</td>
<td>122 (28.9)</td>
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<td>Last degree completed</td>
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<tr>
<td>Primary education</td>
<td>2 (0.5)</td>
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<tr>
<td>6th grade</td>
<td>7 (1.7)</td>
</tr>
<tr>
<td>9th grade</td>
<td>18 (4.3)</td>
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<tr>
<td>High school (12th grade)</td>
<td>142 (33.6)</td>
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<tr>
<td>Undergraduate degree</td>
<td>164 (38.9)</td>
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<tr>
<td>Master's degree</td>
<td>80 (19.0)</td>
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<tr>
<td>PhD</td>
<td>5 (1.2)</td>
</tr>
<tr>
<td>Household monthly income</td>
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<td>Up to 1000€</td>
<td>100 (23.7)</td>
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<tr>
<td>Between 1001€ and 1500€</td>
<td>88 (20.9)</td>
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<tr>
<td>Between 1501€ and 3000€</td>
<td>148 (35.1)</td>
</tr>
<tr>
<td>Between 3001€ and 5000€</td>
<td>30 (7.1)</td>
</tr>
<tr>
<td>More than 5001€ Don't know/don't answer</td>
<td>25 (5.9) 31 (7.3)</td>
</tr>
</tbody>
</table>

**Instruments**

**Socio-Demographic Questionnaire**
Information about gender, age, educational level and relational status were collected through a self-reported sociodemographic questionnaire.

**Adulthood Victimization Experiences Questionnaire**
Three victimization types were assessed by the Adulthood Victimization Experiences Questionnaire (adapted from Lisboa et al. 2009 by Magalhães et al.): psychological (nine items; e.g., "During the last year, were you exposed to behaviors or words to humiliate you or to make you feel diminished?"); physical (five items; e.g., "During the last year, has someone punched or beaten you?") and sexual (four items; e.g., "During the last year, has someone had or tried to have with you any sexual act by using force or threatening to hurt you or someone close?"). Items were responded using a five-point Likert scale, ranging from 0 (Never) to 4 (Often/Frequently – More than 10 times). In this study, adequate reliability evidence was found: Psychological Victimization ($\alpha = .82$), Sexual victimization ($\alpha = .68$) and Physical victimization ($\alpha = .90$).

**COPE-Inventory**
The COPE Inventory (Carver et al. 1989, adapted by Cabral & Matos) is a theoretically constructed, multidimensional coping scale to assess different ways in which people respond to stress (functional and dysfunctional). In this study, based on previous psychometric evidence (Cabral & Matos,), six subscales were selected: Avoidant (seven items; e.g., "I refuse to believe that it has happened"), Support Seeking (five items; e.g., "I talk to someone about how I feel"), Active/Reflexive (seven items; e.g., "I concentrate my efforts on doing something about it."), Substance Use (four items; e.g., "I drink
alcohol, in order to think about it less"), Positive Meaning (five items; e.g., "I learn to live with it") and Humor (four items; e.g., "I make fun about the problem"). Each item was measured on a six-point Likert scale, ranging from 1 (Strongly Disagree) to 6 (Strongly Agree). In this study, two general dimensions of coping were used in the analysis: Adaptive Coping (i.e., Support Seeking, Active/Reflexive, Positive Meaning and Humor; \( \alpha = .90 \)) and Maladaptive Coping (i.e., Avoidant and Substance Use; \( \alpha = .79 \)).

General Self-Efficacy Scale
This self-report measure (GSE; Schwarzer & Jerusalem, 1995, adapted by Araújo & Moura,) includes ten items (e.g., "I can always manage to solve difficult problems if I try hard enough") and aims to assess optimistic self-beliefs to cope with a variety of difficult demands in life. Participants responded to this instrument using a four-point Likert scale, ranging from 1 (It is not true at all) to 4 (Exactly true). Higher scores are indicative of greater perceived self-efficacy. In the present study, Cronbach's alpha was .88.

Brief Symptom Inventory
BSI (Derogatis, 1993, adapted by Canavarro) is a self-report inventory focused on psychological symptoms that is widely used to assess mental health difficulties. In this study, two subscales were selected: Depression (six items evaluating mood and affect distress/problems, lack of motivation and loss of interest in life; e.g., "Feeling lonely"; Cronbach's alpha = .89) and Anxiety (six items evaluating symptoms of nervousness and tension, panic attacks and feelings of terror; e.g., "Terror or panic attacks"; Cronbach's alpha = .87). Each item was measured on a five-point Likert scale, ranging from 0 (Never) to 4 (Very often). Higher scores reflect greater symptoms, during last week.

The Satisfaction with Life Scale (SWLS)
The SWLS (Diener et al. 1985, adapted by Simões) is a short five-item instrument (e.g., "In most ways my life is close to my ideal") designed to measure global judgments of satisfaction with one's life. Participants were asked to rate each item on a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Higher scores reflecting greater well-being. Cronbach's alpha obtained in this study was .89.

Procedures And Data Analysis
This study was part of a larger project examining the role of individual and socio-cognitive variables in the relation between victimization in adulthood and mental health and was approved by the Ethics and Deontology Committee for Scientific Research of the University. An online survey methodology was used to collect data. A link describing the study was released in social networks and mailing lists to recruit adults in the community (who were 18 years of age or older and understood Portuguese). The link was delivered through publications on Facebook using the research team’s personal pages and using a snowball strategy (i.e., inviting people to participate and further disseminate by posting the link on their Facebook page). The link was also passed on through mailing lists at the university. The first page of the online questionnaire included the consent form, which described the study’s objectives, risks and advantages, the voluntary nature of participation, and information guaranteeing data protection and confidentiality. After reading the form, participants consented to participate by selecting the button "accept to participate", and then completed the self-report questionnaires. They also were given contact information for the principal investigator if they wanted additional information. No financial assistance, compensation or incentives were provided.
Descriptive statistics were performed through IBM SPSS® for Windows (Version 23.0). Based on previous literature (e.g., Bonsaksen et al.; Daig et al.; Sollár & Sollárová; Tamres et al.), we examined gender and age differences and their intercorrelations with the other variables. Furthermore, the role of poly-victimization on mental health outcomes (i.e., satisfaction with life, anxiety and depression) was explored with a subsample of participants who reported at least one victimization experience (N = 252). Through a t-test for independent samples, we compared mental health outcomes of participants who reported merely one type of victimization (n = 208) and participants who reported poly-victimization (i.e., two or three victimization experiences; n = 44).

Prior to testing the mediating models, the diagnosis of multicollinearity was performed by evaluating the Variance Inflation Factor (VIF). Because age and gender were related to several of the other variables (i.e., physical victimization, satisfaction with life, anxiety and self-efficacy), the test of the mediating models was conducted controlling for age and gender. IBM AMOS® for Windows (Version 20.0; Arbuckle) was used to conduct path analyses (maximum likelihood estimation) on the two-path mediating effect of self-efficacy and coping on the relationship between victimization and mental health (Model 1). Given that this is a cross-sectional study, we also tested two alternative models proposing a) self-efficacy and coping as mediators at the same level (and not a sequence from self-efficacy to coping) (Model 2); b) mental health outcomes as a predictor of victimization, including the two-path mediating effect of self-efficacy and coping (Model 3). The significance of mediating effects was tested through a bootstrap approach (Shrout & Bolger) with 95% confidence intervals generated with bias corrected bootstrapping (5000 resamples). Model fit is considered adequate if these criteria are fulfilled: the relative χ² index (χ²/df) values ≤ 2 (Arbuckle), the Comparative Fit Index (CFI) ≥.95, Goodness of Fit Index (GFI) ≥.90; the Root Mean Square Error of Approximation (RMSEA) ≤.08 and the Standardized Root Mean Residual (SRMR) ≤.08 (Hu & Bentler; Schermelleh-Engel et al.; Schreiber et al.). For model parsimony, we examined the Akaike Information Criterion (AIC) and the Expected Cross-Validation Index (ECVI), selecting the model with the lowest values (Schermelleh-Engel et al.). Based on these criteria, Model 1 revealed the best fit statistics: χ² (16) = 42.649, p <.001; χ²/df = 2.666; CFI = .98; GFI = .98; RMSEA = .06, 90% CI [.04 to .09]; SRMR = .04; AIC = 142.649; ECVI = .339. Model 2 revealed the poorest fit statistics (χ² (18) = 199.180, p <.001; χ²/df = 11.066; CFI = .84; GFI = .94; RMSEA = .16, 90% CI [.14 to .17]; SRMR = .08; AIC = 295.180; ECVI = .701). Finally, model 3 revealed an adequate fit to the data (χ² (16) = 45.844, p <.001; χ²/df = 2.865; CFI = .97; GFI = .98; RMSEA = .07, 90% CI [.04 to .09]; SRMR = .04) but showed slightly greater levels of AIC = 145.844 and ECVI = .346 than Model 1. As such, based on guidelines to choose more parsimonious models (Schermelleh-Engel et al.), Model 1 was selected and will be presented and discussed in the current manuscript. Given the large number of women in the sample, we explored Model 1 merely with the subsample of women (N = 357). The same pattern of results was found on total, direct and mediation effects, except in the direct relationship between the maladaptive coping and satisfaction with life, which became non-significant (β = −.09; p = .060). Considering the similar pattern of results, findings from the whole sample will be detailed and discussed.
Results

Descriptive analyses
Statistically significant gender differences were found on self-efficacy, with male participants revealing higher scores (Table 2). Correlational analyses revealed that older participants tended to show lower scores on physical victimization, satisfaction with life and anxiety. Psychological victimization was positively correlated with maladaptive coping strategies, the other two forms of victimization, depression and anxiety, and negatively with satisfaction with life. Physical victimization was positively correlated with adaptive coping strategies, the other two forms of victimization, self-efficacy and depression, and negatively with satisfaction with life. Sexual victimization was positively correlated with maladaptive coping. Self-efficacy was positively correlated with satisfaction with life, and negatively with maladaptive coping, depression and anxiety (Table 3). Statistically significant differences were found on anxiety, depression and satisfaction with life, with participants reporting poly-victimization experiences revealing higher scores on depression and anxiety and lower satisfaction with life (Table 4).

Table 2. Gender differences on victimization, self-efficacy, coping and mental health

<table>
<thead>
<tr>
<th></th>
<th>Female (n = 357) M(SD)</th>
<th>Male (n = 65) M(SD)</th>
<th>t</th>
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</thead>
<tbody>
<tr>
<td>Psychological Victimization</td>
<td>0.31 (0.50)</td>
<td>0.25 (0.40)</td>
<td>.964</td>
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<tr>
<td>Physical Victimization</td>
<td>0.07 (0.36)</td>
<td>0.05 (0.16)</td>
<td>.374</td>
</tr>
<tr>
<td>Sexual Victimization</td>
<td>0.02 (0.13)</td>
<td>0.03 (0.10)</td>
<td>-.304</td>
</tr>
<tr>
<td>Satisfaction with life</td>
<td>3.15 (0.87)</td>
<td>3.13 (0.90)</td>
<td>.188</td>
</tr>
<tr>
<td>Depression</td>
<td>1.04 (0.89)</td>
<td>1.06 (0.85)</td>
<td>-.173</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.08 (0.88)</td>
<td>0.93 (0.79)</td>
<td>1.23</td>
</tr>
<tr>
<td>Maladaptive coping</td>
<td>1.69 (0.58)</td>
<td>1.78 (0.68)</td>
<td>-1.01</td>
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<tr>
<td>Adaptive coping</td>
<td>3.85 (0.80)</td>
<td>3.77 (0.71)</td>
<td>.783</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>2.98 (0.51)</td>
<td>3.11 (0.46)</td>
<td>-1.97*</td>
</tr>
</tbody>
</table>

N = 422; *p <.05.

Table 3. Correlational analyses between victimization, self-efficacy, coping and mental health

<table>
<thead>
<tr>
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<th>4</th>
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<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
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</thead>
<tbody>
<tr>
<td>1. Psychological Victimization</td>
<td>.495*</td>
<td>.206*</td>
<td>-.289*</td>
<td>.394***</td>
<td>.441**</td>
<td>-.065</td>
<td>.193***</td>
<td>.011</td>
<td>-.071</td>
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<tr>
<td>2. Physical Victimization</td>
<td>.260*</td>
<td>-.116*</td>
<td>.105*</td>
<td>.086</td>
<td>.126*</td>
<td>.041</td>
<td>.105*</td>
<td>-.100*</td>
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<tr>
<td>3. Sexual Victimization</td>
<td>0.002</td>
<td>0.068</td>
<td>0.053</td>
<td>-.075</td>
<td>.177***</td>
<td>-.025</td>
<td>-.072</td>
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<tr>
<td>4. Satisfaction with life</td>
<td>-.403*</td>
<td>-.258*</td>
<td>.342***</td>
<td>-.214*</td>
<td>.281**</td>
<td>-.201**</td>
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<tr>
<td></td>
<td>Depression</td>
<td>Anxiety</td>
<td>Satisfaction with life</td>
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<td>5.</td>
<td>.786***</td>
<td>−.378**</td>
<td>.454***</td>
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<td>6.</td>
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<td>−.170*</td>
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<tr>
<td>7.</td>
<td>−.170*</td>
<td>−.094</td>
<td>−.119*</td>
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<tr>
<td>8.</td>
<td>−.094</td>
<td>−.119*</td>
<td>−.119*</td>
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<tr>
<td>9.</td>
<td>−.119*</td>
<td>.136</td>
<td>−.036</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>.136</td>
<td>.036</td>
<td>.036</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pearson’s correlation coefficient; *p <.05; **p <.01; ***p <.001.

### Table 4. Mean and standard deviations of mental health across the two groups of victimization

<table>
<thead>
<tr>
<th></th>
<th>One-victimization M(SD)</th>
<th>Poly-victimization M(SD)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with life</td>
<td>3.13 (0.88)</td>
<td>2.78 (1.02)</td>
<td>2.315*</td>
</tr>
<tr>
<td>Depression</td>
<td>1.13 (0.86)</td>
<td>1.64 (1.14)</td>
<td>−3.343**</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.15 (0.90)</td>
<td>1.57 (0.97)</td>
<td>−2.778**</td>
</tr>
</tbody>
</table>

N = 252; *p <.05; **p <.01.

The mediating role of self-efficacy and coping in the relationship between victimization and...

The diagnosis of multicollinearity revealed that all VIF values were lower than 3 (Thompson et al.) and the average VIF was not substantially greater than 1 (Lavery et al.), which indicate that problems of multicollinearity are not present (Table 5).

### Table 5. Variance inflation factor (VIF) for the three dependent variables

<table>
<thead>
<tr>
<th></th>
<th>Depression</th>
<th>Anxiety</th>
<th>Satisfaction with Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological victimization</td>
<td>1.376</td>
<td>1.375</td>
<td>1.375</td>
</tr>
<tr>
<td>Physical victimization</td>
<td>1.356</td>
<td>1.354</td>
<td>1.353</td>
</tr>
<tr>
<td>Sexual victimization</td>
<td>1.051</td>
<td>1.047</td>
<td>1.047</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>1.627</td>
<td>1.627</td>
<td>1.623</td>
</tr>
<tr>
<td>Maladaptive coping</td>
<td>1.254</td>
<td>1.243</td>
<td>1.241</td>
</tr>
<tr>
<td>Adaptive coping</td>
<td>1.406</td>
<td>1.415</td>
<td>1.411</td>
</tr>
</tbody>
</table>

Results from the mediating model revealed several statistically significant direct relationships. Psychological victimization predicted greater maladaptive coping and mental health problems, and lower self-efficacy beliefs and satisfaction with life. Physical victimization predicted greater self-efficacy and lower anxiety. Self-efficacy beliefs predicted greater adaptive coping and lower maladaptive coping as well as lower mental health difficulties and greater satisfaction with life. Finally, maladaptive coping predicted greater depression and anxiety, and lower satisfaction with life, and adaptive coping predicted greater satisfaction with life (Figure 1).
Figure 1. Sequential mediating effect of self-efficacy and coping in the relationship between victimization and mental health.

Results also revealed a set of mediating effects (standardized path coefficients are presented in Figure 1) on the association between a) Psychological victimization and satisfaction with life (β = −.06, p = .002), anxiety (β = .07, p < .001) and depression (β = .10, p < .001); b) Physical victimization and anxiety (β = −.05, p = .016). Specifically, psychological victimization was negatively associated with self-efficacy beliefs, lower levels of self-efficacy predicted higher maladaptive coping, which was positively related to anxiety and depression and negatively related to satisfaction with life. In the second pathway, psychological victimization was negatively associated with self-efficacy beliefs, greater self-efficacy predicted adaptive coping, which was positively associated with satisfaction with life. Finally, physical victimization was positively associated with self-efficacy beliefs, lower levels of self-efficacy predicted greater maladaptive coping, which was positively related to anxiety.

Discussion
This study shows that associations between victimization and mental health are complex. In the current study, mental health was conceptualized as a holistic state (Westerhof & Keyes) that includes indicators of well-being (subjective well-being) and psychopathology (anxiety and depression). The three subtypes of victimization revealed different patterns of associations with self-efficacy, coping strategies and mental health outcomes, and coping differentially predicted psychopathology and subjective well-being. Examining multiple subtypes of victimization thus produces a more thorough description of its associations with coping, psychopathology and well-being than studies focused on only one subtype of victimization (Armour et al.; Karakurt & Silver). Although more research has focused on physical or sexual violence than psychological violence (e.g., Chang et al.; Maldonado et al.), the present study found that psychological victimization was more closely related to mental health outcomes than were physical or sexual victimization.

These data are consistent with research indicating that psychological violence is an independent and stronger predictor of depression and anxiety than is physical violence (Pico-Alonso et al.). Considering that psychological victimization involves behaviors such as intimidation, humiliation, ridicule, and...
control (Lagdon et al.; Norwood & Murphy; Sackett & Saunders), this type of violence may undermine self-related representations, or the way that individuals value themselves and their abilities, which may have a stronger impact on internalizing symptomatology (anxiety or depression) and well-being than other forms of victimization. Psychologically abusive behaviors also can be associated with fear and self-doubt (Lagdon et al.), which may explain lower beliefs about one's abilities to deal with different challenges in life. Moreover, psychological violence often is a precursor to physical abuse in close relationships (Karakurt & Silver), which highlights the importance of exploring emotional and psychological dimensions of abusive relationships. This finding is particularly important considering that psychological violence tends to be more socially invisible and is perceived as less harmful than sexual or physical victimization. Moreover, our results were in line with previous findings on the role of poly-victimization in mental health problems (Elliott et al.; Sabina & Straus) adding evidence that poly-victims revealed greater anxiety and depression and also lower subjective well-being.

Furthermore, our results highlight the role of self-efficacy beliefs as a mediator of the association between victimization, coping and mental health. This evidence is congruent with theoretical assumptions that greater self-efficacy beliefs may be more closely associated with engagement in adaptive coping strategies (e.g., active, problem-solving), and these adaptive strategies may be associated to better mental health (Grych et al.). In contrast, lower beliefs about one's ability to deal with stress may be more closely associated with maladaptive strategies, and maladaptive coping may be associated with poor health outcomes (Benight & Bandura). Higher self-efficacy beliefs involve greater ability to process information, mobilize resources and exercise control, which may predict greater adaptive mental health outcomes (Bandura).

Moreover, tests of our mediation model revealed that different coping strategies had different associations with psychopathology and well-being. Maladaptive coping was found to play an intervening role in the association between victimization and depression and anxiety, but adaptive coping mediated only the relationship between victimization and satisfaction with life. Maladaptive coping strategies included substance use and avoidant behaviors such as denying the severity or impact of stressful events behaviors and failing to engage in more active problem-solving strategies (Cabral & Matos). This result reinforces previous findings demonstrating the mediating role of maladaptive strategies (e.g., avoidant coping) in the association between psychological abuse and mental health (Calvete et al.; Flanagan et al.). Such evidence could be understood in terms of classical theories of learned helplessness (Abramson et al.), which have been applied in the context of intimate partner violence (Walker). Consistent with previous evidence (Maier & Seligman), our data suggest that individuals exposed to psychological violence may have learned that they are not able to adequately cope with stressful events, which may predict greater anxiety and depression. Moreover, victimization might elicit greater anger and fear, which some individuals may try to neutralize through maladaptive strategies such as substance use behaviors (Pinchevsky et al.); however, these strategies are associated with greater depression and anxiety.

In sum, these results reinforce the need to explore mental health through a holistic perspective that includes both psychopathology and well-being. While depressive and anxious symptomatology involves cognitive and behavioral avoidance, ruminative patterns (Dickson et al.; Riley et al.), and uncontrollable worry (Stapinski et al.), it is theoretically expected that coping strategies involving avoidance and
denial behaviors might better contribute to those symptoms. On the other hand, adaptive coping significantly predicted well-being but was not associated with depression and anxiety. This finding is consistent with previous evidence about the positive role of adaptive coping (e.g., support seeking, problem-focused or task-oriented coping) in satisfaction with life (Boujut et al.; Buser & Kearney; Cabras & Mondo). Active forms of coping may be particularly beneficial for promoting positive appraisals of one's life, as these strategies involve active behaviors (e.g., seeking for support, being able to find meaning and to be reflexive about solutions for difficulties) which may promote a coherent and favorable individual's attitude about life.

An unexpected result was finding positive associations between physical violence and self-efficacy and negative associations with anxiety. It is not clear why victims of physical violence would report more self-efficacy or lower anxiety given that it typically is associated with negative outcomes. Physical victimization was reported less frequently than psychological victimization in this sample, and it is possible that some of the individuals reporting these relationships in the prior year left the relationships by the time they participated in the survey, and experienced increased self-efficacy as a result. Because physical victimization has greater visibility and social recognition than emotional or psychological victimization, victims may be more likely to recognize that it is occurring, and to know how to seek help or support, experiencing less anxiety.

The results described in the current study underlined the negative role of psychological victimization experiences on personal assets and mental health (e.g., Beeble et al.; Buchanan et al.; Hamdan-Mansour et al.) and support the hypothesis that personal assets, such as self-efficacy, can be associated with adaptive coping efforts (Grych et al.). We found that positive self-efficacy beliefs were associated with higher levels of satisfaction with life and lower levels of depression and anxiety. Greater self-efficacy can promote greater mobilization of resources, more active behaviors in decision-making processes, and greater control over challenging events (Bandura), which is consistent with the proposition that believing in one's abilities may empower human agency (Benight & Bandura).

In sum, this study provides important and innovative contributions to the literature and practice on this topic, given that: a) previous research has explored victimization in particular relationships, primarily with intimate partners; and b) most studies focused on the relationship between victimization and psychopathology. In this study, we assessed victimization experiences broadly (e.g., marital, work, family or friends) in order to provide a more accurate picture of the cumulative risk of victimization to individual mental health. Further, we explored psychopathology and well-being in the same model and found that the same victimization experience were associated with psychopathology and well-being through different paths (e.g., adaptive or maladaptive coping), which is a novel contribution of the study.

Limitations and implications
Although this study has a number of methodological strengths, it also has limitations. First, it is based on a convenience sample, collected through a non-probabilistic method, which limits generalizability. Our sample included a significant proportion of younger participants, female and single adults, which suggests the need for further studies including participants with a more diverse profile. This may be due to the strategies used for study dissemination and participant recruitment, which occurred mostly
in a university context (i.e., mailing lists) and on Facebook (probably a resource most used by young people). Nevertheless, our results can significantly contribute to this research topic, given that women and young adults (e.g., college students) are particularly vulnerable groups to victimization experiences (Forke et al.; Heer & Jones; Kelley et al.; Schwartz et al.). Sociocultural factors such as sexism or gender stereotypes may be related with this greater vulnerability of women for violence, as well as for a more severe impact on their mental health (Kelley et al.; Schwartz et al.). Further, greater exposure to risk contexts and risk behaviors (e.g., less protective behaviors, drug and/or alcohol consumption) can put young adults in a position of greater vulnerability for violence (Forke et al.; O’Malley & Johnston).

Moreover, even though the results did not differ when we tested the hypothesized model with only the women in the sample, a careful analysis of gender-specific effects requires a representative and balanced sample of men and women. With a more gender-balanced sample we would be able to explore whether mediating effects are gender-specific by testing a moderated mediation model. Second, the cross-sectional design does not allow for inferences about causal relationships in the mediating model. However, two additional competing models were tested, and results revealed poorer fit statistics, which justified the selection of this model. For these reasons, future research is needed to test this model with a longitudinal design using representative samples.

Despite these limitations, the findings of the present study provide some important insights for research and practice of professionals who work with victims of violence. First, multidimensional assessment strategies should be adopted for victimization, personal resources and mental health outcomes. Developing evaluation processes based on a specific type of victimization or on a particular context may lead to a biased understanding of mental health outcomes. Also, behaviorally-oriented assessments that ask about specific types of abuse are more useful for obtaining a comprehensive picture of victimization than methodologies that focus only on victims' global, subjective perceptions of whether or not they have been abused. Furthermore, assessing only psychopathology neglects an important part of mental health: well-being. Even if victims do not show significant psychological symptoms, they may have low levels of well-being. This group of people (called "Vulnerable" in the Dual Factor Model of mental health) tends to be neglected by intervention services (Suldo & Shaffer) but demonstrate poorer functioning than those higher in well-being (Magalhães & Calheiros).

Second, we found that psychological victimization had the strongest associations with mental health outcomes. Considering the negative impact of those psychological abusive behaviors (e.g., humiliation, lack of control), it is important for policy makers and mental health professionals to be aware of the potential need to foster victims' self-efficacy. Several approaches may be adopted to promote self-efficacy beliefs, including reinforcing successful experiences (mastery experiences), involving significant others in the intervention as social role models and supportive elements (vicarious experiences and social persuasion), validating their thoughts and feelings related to victimization, and addressing feelings of self-blame (Machado & Gonçalves). Enhancing self-efficacy could interrupt the development of maladaptive coping strategies and mental health difficulties and lead to the use of more adaptive strategies. However, longitudinal designs are needed to accurately identify the mechanisms behind the association between victimization and mental health.

Professionals also must be able to counteract women's additional psychological vulnerability through practices that may foster their empowerment, self-efficacy and safety (García-Moreno et al.). Reducing
victims' vulnerability is crucial to prevent further revictimization (Löbmann et al.) and long-term negative effects. Greater credibility, support and resources should be provided to prevent feelings of guilt, poor self-efficacy beliefs and adaptive coping strategies. The literature describes dominant/control behaviors as a significant predictor of interpersonal violence (Luo), which is consistent with a patriarchal ideology that justifies gender-based violence – men are viewed as superior to women in different social structures and there are norms and values justifying this superiority (Haj-Yahia).

Further, considering the associations between maladaptive coping and mental health, professionals need to develop efforts to prevent social isolation, promote victims' skills and resources on support seeking and restructure maladaptive coping beliefs. Victims' support services must develop interventions using a needs-oriented approach, considering the multiplicity of trajectories that are possible, and the specific needs of each victim in terms of vulnerability and protection. Finally, in order to assure that victims of interpersonal violence, and particularly women, benefit from qualified services, it is important to provide training opportunities to health professionals, assuring that they are able to develop the necessary skills to work with victims of violence (e.g., empathize with victims suffering, providing adequate support, and if necessary, referring the victim to other service; García-Moreno et al.).

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References


