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

Adverse effects of interpersonal violence on mental health have been extensively documented (Clements & Ogle, 2009; Dworkin et al., 2017). The literature points out the particularly negative effect of poly-victimization (Elliott et al., 2009; Sabina & Straus, 2008), 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., 2008). 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., 1999; also see Lagdon et al., 2014). Sexual assault victimization also predicts greater psychopathology (e.g., depression, anxiety), and shows stronger associations with anxiety (e.g., posttraumatic stress; Dworkin et al., 2017). Women are more likely to be victims of violence than are men (e.g., sexual violence; Kelley et al., 2016; Pimlott-Kubiak & Cortina, 2003), but it is unclear if female victims of interpersonal violence are more vulnerable to psychopathology than male victims (Breslau et al., 1999; Pimlott-Kubiak & Cortina, 2003).

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, 2005), and measures of well-being and psychopathology have been shown to be independent but related factors (e.g., Keyes, 2005; Magalhães & Calheiros, 2017). Examining well-being in victims of interpersonal violence has several benefits. Most notably, higher levels of well-being are associated with positive physical

24 health outcomes and longevity, better functioning in the workplace and academic settings, and  
25 more positive relationships (Howell et al., 2016). Further, the success of mental illness  
26 interventions may be capitalized by the promotion of well-being (Howell et al., 2016),  
27 highlighting the need for a more holistic approach to mental health policies and interventions. A  
28 more comprehensive understanding of the effects of victimization can be gained by including  
29 indicators of well-being (e.g., satisfaction with life; Ryan & Deci, 2001) and psychopathology in  
30 the same analytic model. However, with few exceptions (e.g., Hamby et al., 2018), the impact of  
31 victimization on mental health outcomes has not been systematically explored while  
32 simultaneously considering indicators of psychopathology and well-being in the same study. In  
33 the present study, mental health is conceptualized as including both positive (well-being) and  
34 negative (psychopathology) outcomes (Westerhof & Keyes, 2010).

35 Finally, there is a compelling need to understand *how* victimization impacts mental health  
36 by exploring the mechanisms linking violence to psychopathology and well-being. Grych,  
37 Hamby, and Banyard (2015) introduced an integrative framework, the Resilience Portfolio  
38 Model, that describes a set of protective factors proposed to explain adaptive and maladaptive  
39 outcomes in victims of violence. A key process in the model involves the effect of individual  
40 assets (e.g., self-efficacy) on coping behavior, which in turn is proposed to affect psychological  
41 health (Grych et al., 2015). However, the hypothesis that self-efficacy and effective coping  
42 mediate those associations has not been tested.

### 43 **Self-Efficacy Beliefs and Coping Strategies: What Role Do They Play?**

44 Coping strategies refer to what people do to respond to stressful life experiences  
45 (Folkman & Lazarus, 1985; Lazarus, 1993), and vary in their effectiveness. Maladaptive  
46 strategies may involve avoiding the problem (e.g., substance use, avoidant behaviors) and

47 adaptive strategies include efforts to directly address the problem and to seek support from others  
48 (Hughto et al.,2017). Maladaptive coping strategies adopted by victims of interpersonal violence  
49 are associated with higher levels of depression (Clements et al.,2004) and post-traumatic stress  
50 disorder (Krause et al.,2008). For example, emotion-focused coping strategies tend to be related  
51 to more psychological difficulties and problem-focused strategies to lower levels of  
52 psychopathology (Clements & Sawhney, 2000). Several studies have shown that avoidant coping  
53 (e.g., denial and behavioral distractions) predicts greater PTSD symptoms, both cross-sectionally  
54 (Dunmore et al.,1999) and longitudinally (Krause et al., 2008), and depression in victims of  
55 violence (Hughto et al., 2017).

56 Identifying factors that predict the use of adaptive versus maladaptive coping behaviors is  
57 needed to better understand health outcomes in victims of abuse and violence (Lazarus &  
58 Folkman, 1984; Grych et al., 2015). One particularly important factor may be self-efficacy.  
59 Human agency derives from a strong sense of personal efficacy, and individuals' beliefs about  
60 their ability to plan, organize and manage different challenges in life may guide their coping  
61 behaviour (Bandura, 2002; Masten et al., 2004). Self-efficacy beliefs are influenced by mastery  
62 experiences (i.e., previous success positively affects self-efficacy beliefs), vicarious experiences  
63 (i.e., positive social role models are associated with adaptive self-efficacy beliefs), social  
64 persuasion (i.e., people who are persuaded about their abilities tend to invest more efforts in  
65 pursuit of their goals) and emotional states (i.e., mood influences the ability of people think  
66 about their self-efficacy). Supportive and warm relationships with significant others appear to  
67 play a positive role in developing self-efficacy while being victimized threatens “people’s  
68 general positive assumptions of themselves and the world and other” (Janoff-Bulman, 1985, as  
69 cited in Mikkelsen & Einarsen, 2002, p. 398). Research indicates that greater victimization is

70 associated with lower levels of self-efficacy beliefs during adolescence (Kokkinos & Kipritsi,  
71 2012) and adulthood (Albaugh & Nauta, 2005). Also, evidence suggests that self-efficacy beliefs  
72 might vary significantly by gender, with women scoring lower than men (Scholz et al., 2002).

73 Further, a set of cognitive, emotional and motivational mechanisms is involved in  
74 efficacy-activated processes (Benight & Bandura, 2004). Higher levels of self-efficacy are  
75 associated with the ability to: a) anticipate positive scenarios and effectively process information  
76 (Cognitive Processes), b) mobilize resources needed to make decisions and achieve goals  
77 (Motivational Processes), c) exercise control over stressors and regulate emotional responses  
78 (Affective Processes) (Bandura, 2002). As such, higher levels of self-efficacy thus may be  
79 associated with more active and problem-solving coping strategies that promote well-being,  
80 whereas lower self-efficacy beliefs may be more closely associated with avoidant strategies that  
81 undermine healthy functioning (Benight & Bandura, 2004). Moreover, the literature suggests that  
82 women and men might differ on the coping strategies they prefer to use, with women tending to  
83 seek emotional support and use positive self-talk strategies more than men, and men tending to  
84 use more avoidant strategies when facing, for instance, relationship stressors (Tamres et al.,  
85 2002).

86 Calvete and colleagues (2008) investigated the mediating and moderating role of coping  
87 on the relationship between violence and psychological symptoms and found evidence of  
88 mediation but not moderation. Specifically, the authors found that (a) different types of  
89 victimization are differently associated with coping strategies, with psychological abuse  
90 predicting greater disengagement (e.g., avoidance and denial strategies) and primary control  
91 coping (e.g., emotion regulation, problem solving), and physical abuse predicting lower primary  
92 control coping; and (b) there is an indirect relationship between psychological abuse and distress

93 mediated by disengagement coping (Calvete et al., 2008). These studies have begun to document  
94 associations among victimization, coping, and adjustment, but further research is needed to  
95 understand the pathways linking particular types of victimization experiences, specific coping  
96 strategies, and mental health outcomes. In particular, multidimensional approaches to assessing  
97 all three constructs are needed; the existing literature focuses mainly on psychopathology rather  
98 than well-being and on measuring a narrow range of coping strategies and types of victimization  
99 (Breiding et al., 2015). The present study is based on the theoretical assumption that individuals  
100 are agents of change and adaptation (Benight & Bandura, 2004) as well as on previous evidence  
101 and theoretical assumptions about the mediating role of coping (Calvete et al., 2008; Grych et al.,  
102 2015). We aim to test a pathway in which adults' self-efficacy and coping efforts mediate the  
103 relationship between victimization experiences and mental health outcomes, including both  
104 psychopathology and well-being. We propose that greater victimization experiences will be  
105 associated with lower levels of self-efficacy, lower self-efficacy beliefs will be related to  
106 maladaptive coping, and maladaptive coping will be associated with poorer mental health.

## 107 **Method**

### 108 **Participants**

109 A sample of 422 Portuguese adults, aged from 18 to 77 years old ( $M = 30.05$ ;  $SD =$   
110  $10.93$ ), completed a set of self-report questionnaires. Most were female (85%), single (72.3%),  
111 involved in an intimate relationship with cohabitation (37.4%), and had completed an  
112 undergraduate course (38.9%) (Table 1). Analyzing the prevalence of victimization experiences  
113 during the last year, we found that 41% did not report any victimization experience, 49%  
114 reported one type of victimization and 10% reported two or three. Specifically, 56.4% of our

115 participants reported at least one experience of psychological victimization, 8.8% reported  
116 physical victimization and 5.7% reported sexual victimization.

117 [INSERT TABLE 1]

## 118 **Instruments**

### 119 *Socio-Demographic Questionnaire*

120 Information about gender, age, educational level and relational status were collected  
121 through a self-reported sociodemographic questionnaire.

### 122 *Adulthood Victimization Experiences Questionnaire*

123 Three victimization types were assessed by the Adulthood Victimization Experiences  
124 Questionnaire (adapted from Lisboa et al., 2009 by Magalhães et al., 2019): psychological (nine  
125 items; e.g., “*During the last year, were you exposed to behaviours or words to humiliate you or*  
126 *to make you feel diminished?*”), physical (five items; e.g., “*During the last year, has someone*  
127 *punched or beaten you?*”) and sexual (four items; e.g., “*During the last year, has someone had or*  
128 *tried to have with you any sexual act by using force or threatening to hurt you or someone*  
129 *close?*”). Items were responded using a five-point Likert scale, ranging from 0 (*Never*) to 4  
130 (*Often/Frequently – More than 10 times*). In this study, adequate reliability evidence was found:  
131 Psychological Victimization ( $\alpha = .82$ ), Sexual victimization ( $\alpha = .68$ ) and Physical victimization  
132 ( $\alpha = .90$ ).

### 133 *COPE-Inventory*

134 The COPE Inventory (Carver et al., 1989, adapted by Cabral & Matos, 2010) is a  
135 theoretically constructed, multidimensional coping scale to assess different ways in which people  
136 respond to stress (functional and dysfunctional). In this study, based on previous psychometric  
137 evidence (Cabral et al., 2010), six subscales were selected: Avoidant (seven items; e.g., “*I refuse*

138 *to believe that it has happened*”), Support Seeking (five items; e.g., “*I talk to someone about how*  
139 *I feel*”), Active/Reflexive (seven items; e.g., “*I concentrate my efforts on doing something about*  
140 *it.*”), Substance Use (four items; e.g., “*I drink alcohol, in order to think about it less*”), Positive  
141 Meaning (five items; e.g., “*I learn to live with it*”) and Humour (four items; e.g., “*I make fun*  
142 *about the problem*”). Each item was measured on a six-point Likert scale, ranging from 1  
143 (*Strongly Disagree*) to 6 (*Strongly Agree*). In this study, two general dimensions of coping were  
144 used in the analysis: Adaptive Coping (i.e., Support Seeking, Active/Reflexive, Positive Meaning  
145 and Humour;  $\alpha = .90$ ) and Maladaptive Coping (i.e., Avoidant and Substance Use;  $\alpha = .79$ ).

#### 146 ***General Self-Efficacy scale***

147 This self-report measure (GSE; Schwarzer & Jerusalem, 1995, adapted by Araújo &  
148 Moura, 2011) includes ten items (e.g., “*I can always manage to solve difficult problems if I try*  
149 *hard enough*”) and aims to assess optimistic self-beliefs to cope with a variety of difficult  
150 demands in life. Participants responded to this instrument using a four-point Likert scale, ranging  
151 from 1 (*It is not true at all*) to 4 (*Exactly true*). Higher scores are indicative of greater perceived  
152 self-efficacy. In the present study, *Cronbach’s alpha* was .88.

#### 153 ***Brief Symptom Inventory***

154 BSI (Derogatis, 1993, adapted by Canavarro, 2007) is a self-report inventory focused on  
155 psychological symptoms that is widely used to assess mental health difficulties. In this study, two  
156 subscales were selected: Depression (six items evaluating mood and affect distress/problems,  
157 lack of motivation and loss of interest in life; e.g., “*Feeling lonely*”; *Cronbach’s alpha* = .89) and  
158 Anxiety (six items evaluating symptoms of nervousness and tension, panic attacks and feelings  
159 of terror; e.g., “*Terror or panic attacks*”; *Cronbach’s alpha* = .87). Each item was measured on a



160 five-point Likert scale, ranging from 0 (*Never*) to 4 (*Very often*). Higher scores reflect greater  
161 symptomology, during last week.

### 162 ***The Satisfaction with Life Scale (SWLS)***

163 The SWLS (Diener et al., 1985, adapted by Simões, 1992) is a short five-item instrument  
164 (e.g., “*In most ways my life is close to my ideal*”) designed to measure global judgments of  
165 satisfaction with one's life. Participants were asked to rate each item on a five-point Likert scale,  
166 ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Higher scores reflecting greater well-  
167 being. *Cronbach's alpha* obtained in this study was .89.

### 168 **Procedures and Data Analysis**

169 This study was part of a larger project examining the role of individual and socio-  
170 cognitive variables in the relation between victimization in adulthood and mental health and was  
171 approved by the Ethics and Deontology Committee for Scientific Research of the University. An  
172 online survey methodology was used to collect data. A link describing the study was released in  
173 social networks and mailing lists to recruit adults in the community (who were 18 years of age or  
174 older and understood Portuguese). The link was delivered through publications on Facebook  
175 using the research team's personal pages and using a snowball strategy (i.e., inviting people to  
176 participate and further disseminate by posting the link on their Facebook page). The link was  
177 also passed on through mailing lists at the university. The first page of the online questionnaire  
178 included the consent form, which described the study's objectives, risks and advantages, the  
179 voluntary nature of participation, and information guaranteeing data protection and  
180 confidentiality. After reading the form, participants consented to participate by selecting the  
181 button “accept to participate”, and then completed the self-report questionnaires. They also were

182 given contact information for the principal investigator if they wanted additional information. No  
183 financial assistance, compensation or incentives were provided.

184 Descriptive statistics were performed through *IBM SPSS® for Windows* (Version 23.0).  
185 Based on previous literature (e.g., Bonsaksen et al., 2018; Daig et al., 2009; Sollár & Sollárová,  
186 2009; Tamres et al., 2002), we examined gender and age differences and their intercorrelations  
187 with the other variables. Furthermore, the role of poly-victimization on mental health outcomes  
188 (i.e., satisfaction with life, anxiety and depression) was explored with a subsample of participants  
189 who reported at least one victimization experience (N = 252). Through a *t-test* for independent  
190 samples, we compared mental health outcomes of participants who reported merely one type of  
191 victimization (n = 208) and participants who reported poly-victimization (i.e., two or three  
192 victimization experiences; n = 44).

193 Prior to testing the mediating models, the diagnosis of multicollinearity was performed  
194 by evaluating the *Variance Inflation Factor (VIF)*. Because age and gender were related to  
195 several of the other variables (i.e., physical victimization, life satisfaction, anxiety and self-  
196 efficacy), the test of the mediating models was conducted controlling for age and gender. *IBM*  
197 *AMOS® for Windows* (Version 20.0; Arbuckle, 2011) was used to conduct path analyses  
198 (*maximum likelihood estimation*) on the two-path mediating effect of self-efficacy and coping on  
199 the relationship between victimization and mental health (Model 1). Given that this is a cross-  
200 sectional study, we also tested two alternative models proposing a) self-efficacy and coping as  
201 mediators at the same level (and not a sequence from self-efficacy to coping) (Model 2); b)  
202 mental health outcomes as a predictor of victimization, including the two-path mediating effect  
203 of self-efficacy and coping (Model 3). The significance of mediating effects was tested through a  
204 bootstrap approach (Shrout & Bolger, 2002) with 95% confidence intervals generated with bias

205 corrected bootstrapping (5000 resamples). Model fit is considered adequate if these criteria are  
206 fulfilled: the *relative  $\chi^2$  index* ( $\chi^2/df$ ) values  $\leq 2$  (Arbuckle, 2011), the *Comparative Fit Index*  
207 (*CFI*)  $\geq .95$ , *Goodness of Fit Index* (*GFI*)  $\geq .90$ ; the *Root Mean Square Error of Approximation*  
208 (*RMSEA*)  $\leq .08$  and the *Standardized Root Mean Residual* (*SRMR*)  $\leq .08$  (Hu & Bentler, 1999;  
209 Schreiber et al., 2006; Schermelleh-Engel et al., 2003). For model parsimony, we examined the  
210 *Akaike Information Criterion* (*AIC*) and the *Expected Cross-Validation Index* (*ECVI*), selecting  
211 the model with the lowest values (Schermelleh-Engel et al., 2003). Based on these criteria,  
212 Model 1 revealed the best fit statistics:  $\chi^2 (16) = 42.649, p < .001$ ;  $\chi^2/df = 2.666$ ; *CFI* = .98; *GFI*  
213 = .98; *RMSEA* = .06, 90% *CI* [.04 to .09]; *SRMR* = .04; *AIC* = 142.649; *ECVI* = .339. Model 2  
214 revealed the poorest fit statistics ( $\chi^2 (18) = 199.180, p < .001$ ;  $\chi^2/df = 11.066$ ; *CFI* = .84; *GFI*  
215 = .94; *RMSEA* = .16, 90% *CI* [.14 to .17]; *SRMR* = .08; *AIC* = 295.180; *ECVI* = .701). Finally,  
216 model 3 revealed an adequate fit to the data ( $\chi^2 (16) = 45.844, p < .001$ ;  $\chi^2/df = 2.865$ ; *CFI* = .97;  
217 *GFI* = .98; *RMSEA* = .07, 90% *CI* [.04 to .09]; *SRMR* = .04) but showed slightly greater levels of  
218 *AIC* = 145.844 and *ECVI* = .346 than Model 1. As such, based on guidelines to choose more  
219 parsimonious models (Schermelleh-Engel et al., 2003), Model 1 was selected and will be  
220 presented and discussed in the current manuscript. Given the large number of women in the  
221 sample, we explored Model 1 merely with the subsample of women ( $N = 357$ ). The same pattern  
222 of results was found on total, direct and mediation effects, except in the direct relationship  
223 between the maladaptive coping and life satisfaction, which became non-significant ( $\beta = -.09$ ;  $p$   
224 = .060). Considering the similar pattern of results, findings from the whole sample will be  
225 detailed and discussed.

226

227

## 228 **Results**

### 229 **Descriptive Analyses**

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

242 INSERT TABLE 2, 3 AND 4 HERE

### 243 **The Mediating Role of Self-Efficacy and Coping in the Relationship Between Victimization** 244 **and Mental Health**

245 The diagnosis of multicollinearity revealed that all *VIF* values were lower than 3  
246 (Thompson et al., 2017) and the average *VIF* was not substantially greater than 1 (Lavery et al.,  
247 2019), which indicate that problems of multicollinearity are not present (Table 5).

248 INSERT TABLE 5 HERE

249 Results from the mediating model revealed several statistically significant direct  
250 relationships. Psychological victimization predicted greater maladaptive coping and mental

251 health problems, and lower self-efficacy beliefs and satisfaction with life. Physical victimization  
252 predicted greater self-efficacy and lower anxiety. Self-efficacy beliefs predicted greater adaptive  
253 coping and lower maladaptive coping as well as lower mental health difficulties and greater life  
254 satisfaction. Finally, maladaptive coping predicted greater depression and anxiety, and lower  
255 satisfaction with life, and adaptive coping predicted greater satisfaction with life (Figure 1).

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

267 INSERT FIGURE 1 HERE

## 268 Discussion

269 This study shows that associations between victimization and mental health are complex.  
270 In the current study, mental health was conceptualized as a holistic state (Westerhof & Keyes,  
271 2010) that includes indicators of well-being (subjective well-being) and psychopathology  
272 (anxiety and depression). The three subtypes of victimization revealed different patterns of  
273 associations with self-efficacy, coping strategies and mental health outcomes, and coping

274 differentially predicted psychopathology and subjective well-being. Examining multiple subtypes  
275 of victimization thus produces a more thorough description of its associations with coping,  
276 psychopathology and well-being than studies focused on only one subtype of victimization  
277 (Armour et al., 2014; Karakurt & Silver, 2013). Although more research has focused on physical  
278 or sexual violence than psychological violence (e.g., Chang et al., 2015; Maldonado et al., 2015),  
279 the present study found that psychological victimization was more closely related to mental  
280 health outcomes than were physical or sexual victimization.

281         These data are consistent with research indicating that psychological violence is an  
282 independent and stronger predictor of depression and anxiety than is physical violence (Pico-  
283 Alonso et al., 2006). Considering that psychological victimization involves behaviors such as  
284 intimidation, humiliation, ridicule, and control (Lagdon et al., 2014; Norwood & Murphy, 2012;  
285 Sackett & Saunders, 1999), this type of violence may undermine self-related representations, or  
286 the way that individuals value themselves and their abilities, which may have a stronger impact  
287 on internalizing symptomatology (anxiety or depression) and well-being than other forms of  
288 psychopathology. Psychologically abusive behaviors also can be associated with fear and self-  
289 doubt (Lagdon et al., 2014), which may explain lower beliefs about one's abilities to deal with  
290 different challenges in life. Moreover, psychological violence often is a precursor to physical  
291 abuse in close relationships (Karakurt & Silver, 2013), which highlights the importance of  
292 exploring emotional and psychological dimensions of abusive relationships. This finding is  
293 particularly important considering that psychological violence tends to be more socially invisible  
294 and is perceived as less harmful than sexual or physical victimization. Moreover, our results  
295 were in line with previous findings on the role of poly-victimization in mental health problems

296 (Elliott et al., 2009; Sabina & Straus, 2008) adding evidence that poly-victims revealed greater  
297 anxiety and depression and also lower subjective well-being.

298         Furthermore, our results highlight the role of self-efficacy beliefs as a mediator of the  
299 association between victimization, coping and mental health. This evidence is congruent with  
300 theoretical assumptions that greater self-efficacy beliefs may be more closely associated with  
301 engagement in adaptive coping strategies (e.g., active, problem-solving), and these adaptive  
302 strategies may be associated to better mental health (Grych et al., 2015). In contrast, lower  
303 beliefs about one's ability to deal with stress may be more closely associated with maladaptive  
304 strategies, and maladaptive coping may be associated with poor health outcomes (Benight &  
305 Bandura, 2004). Higher self-efficacy beliefs involve greater ability to process information,  
306 mobilize resources and exercise control, which may predict greater adaptive mental health  
307 outcomes (Bandura, 2002).

308         Moreover, tests of our mediation model revealed that different coping strategies had  
309 different associations with psychopathology and well-being. Maladaptive coping was found to  
310 play an intervening role in the association between victimization and depression and anxiety, but  
311 adaptive coping mediated only the relationship between victimization and life satisfaction.  
312 Maladaptive coping strategies included substance use and avoidant behaviors such as denying  
313 the severity or impact of stressful events behaviors and failing to engage in more active problem-  
314 solving strategies (Cabral & Matos, 2010). This result reinforces previous findings  
315 demonstrating the mediating role of maladaptive strategies (e.g., avoidant coping) in the  
316 association between psychological abuse and mental health (Calvete et al., 2008; Flanagan et al.,  
317 2014). Such evidence could be understood in terms of classical theories of learned helplessness  
318 (Abramson et al., 1978), which have been applied in the context of intimate partner violence

319 (Walker, 2009). Consistent with previous evidence (Maier & Seligman, 2016), our data suggest  
320 that individuals exposed to psychological violence may have learned that they are not able to  
321 adequately cope with stressful events, which may predict greater anxiety and depression.  
322 Moreover, victimization might elicit greater anger and fear, which some individuals may try to  
323 neutralize through maladaptive strategies such as substance use behaviors (Pinchevsky et al.,  
324 2014); however, these strategies are associated with greater depression and anxiety.

325         In sum, these results reinforce the need to explore mental health through a holistic  
326 perspective that includes both psychopathology and well-being. While depressive and anxious  
327 symptomatology involves cognitive and behavioral avoidance, ruminative patterns (Dickson et  
328 al., 2012; Riley et al., 2019), and uncontrollable worry (Stapinski et al., 2010), it is theoretically  
329 expected that coping strategies involving avoidance and denial behaviors might better contribute  
330 to those symptoms. On the other hand, adaptive coping significantly predicted well-being but  
331 was not associated with depression and anxiety. This finding is consistent with previous evidence  
332 about the positive role of adaptive coping (e.g., support seeking, problem-focused or task-  
333 oriented coping) in life satisfaction (Boujut et al., 2012; Buser & Kearney, 2017; Cabras &  
334 Mondo, 2018). Active forms of coping may be particularly beneficial for promoting positive  
335 appraisals of one's life, as these strategies involve active behaviors (e.g., seeking for support,  
336 being able to find meaning and to be reflexive about solutions for difficulties) which may  
337 promote a coherent and favorable individual's attitude about life. An unexpected result was  
338 finding positive associations between physical violence and self-efficacy and negative  
339 associations with anxiety. It is not clear why victims of physical violence would report more self-  
340 efficacy or lower anxiety given that it typically is associated with negative outcomes. Physical  
341 victimization was reported less frequently than psychological victimization in this sample, and it



342 is possible that some of the individuals reporting these relationships in the prior year left the  
343 relationships by the time they participated in the survey, and experienced increased self-efficacy  
344 as a result. Because physical victimization has greater visibility and social recognition than  
345 emotional or psychological victimization, victims may be more likely to recognize that it is  
346 occurring, and to know how to seek help or support, experiencing less anxiety. The results  
347 described in the current study underlined the negative role of psychological victimization  
348 experiences on personal assets and mental health (e.g., Beeble et al., 2011; Buchanan et al.,  
349 2009; Hamdan-Mansour et al., 2011) and support the hypothesis that personal assets, such as  
350 self-efficacy, can be associated with adaptive coping efforts (Grych et al., 2015). We found that  
351 positive self-efficacy beliefs were associated with higher levels of life satisfaction and lower  
352 levels of depression and anxiety. Greater self-efficacy can promote greater mobilization of  
353 resources, more active behaviors in decision-making processes, and greater control over  
354 challenging events (Bandura, 2002), which is consistent with the proposition that believing in  
355 one's abilities may empower human agency (Benight & Bandura, 2004).

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

### 365 **Limitations and Implications**

366           Although this study has a number of methodological strengths, it also has limitations.  
367 First, it is based on a convenience sample, collected through a non-probabilistic method, which  
368 limits generalizability. Our sample included a significant proportion of younger participants,  
369 female and single adults, which suggests the need for further studies including participants with a  
370 more diverse profile. This may be due to the strategies used for study dissemination and  
371 participant recruitment, which occurred mostly in a university context (i.e., mailing lists) and on  
372 Facebook (probably a resource most used by young people). Nevertheless, our results can  
373 significantly contribute to this research topic, given that women and young adults (e.g., college  
374 students) are particularly vulnerable groups to victimization experiences (Kelley et al., 2016;  
375 Forke et al., 2008; Schwartz et al., 2006; Heer & Jones, 2017). Sociocultural factors such as  
376 sexism or gender stereotypes may be related with this greater vulnerability of women for  
377 violence, as well as for a more severe impact on their mental health (Kelley et al., 2016;  
378 Schwartz, et. al., 2006). Further, greater exposure to risk contexts and risk behaviors (e.g., less  
379 protective behaviors, drug and/or alcohol consumption) can put young adults in a position of  
380 greater vulnerability for violence (Forke et al., 2008; O'Malley & Johnston, 2002).

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

388 reasons, future research is needed to test this model with a longitudinal design using  
389 representative samples.

390         Despite these limitations, the findings of the present study provide some important  
391 insights for research and practice of professionals who work with victims of violence. First,  
392 multidimensional assessment strategies should be adopted for victimization, personal resources  
393 and mental health outcomes. Developing evaluation processes based on a specific type of  
394 victimization or on a particular context may lead to a biased understanding of mental health  
395 outcomes. Also, behaviorally-oriented assessments that ask about specific types of abuse are  
396 more useful for obtaining a comprehensive picture of victimization than methodologies that  
397 focus only on victims' global, subjective perceptions of whether or not they have been abused.  
398 Furthermore, assessing only psychopathology neglects an important part of mental health: well-  
399 being. Even if victims do not show significant psychological symptoms, they may have low  
400 levels of well-being. This group of people (called "Vulnerable" in the Dual Factor Model of  
401 mental health) tends to be neglected by intervention services (Suldo & Shaffer, 2008) but  
402 demonstrate poorer functioning than those higher in well-being (Magalhães & Calheiros, 2017).

403         Second, we found that psychological victimization had the strongest associations with  
404 mental health outcomes. Considering the negative impact of those psychological abusive  
405 behaviors (e.g., humiliation, lack of control), it is important for policy makers and mental health  
406 professionals to be aware of the potential need to foster victims' self-efficacy. Several  
407 approaches may be adopted to promote self-efficacy beliefs, including reinforcing successful  
408 experiences (mastery experiences), involving significant others in the intervention as social role  
409 models and supportive elements (vicarious experiences and social persuasion), validating their  
410 thoughts and feelings related to victimization, and addressing feelings of self-blame (Machado &

411 Gonçalves, 2002). Enhancing self-efficacy could interrupt the development of maladaptive  
412 coping strategies and mental health difficulties and lead to the use of more adaptive strategies.  
413 However, longitudinal designs are needed to accurately identify the mechanisms behind the  
414 association between victimization and mental health.

415 Professionals also must be able to counteract women's additional psychological  
416 vulnerability through practices that may foster their empowerment, self-efficacy and safety  
417 (García-Moreno et al., 2015). Reducing victims' vulnerability is crucial to prevent further  
418 revictimization (Löbmann et al., 2003) and long-term negative effects. Greater credibility,  
419 support and resources should be provided to prevent feelings of guilt, poor self-efficacy beliefs  
420 and adaptive coping strategies. The literature describes dominant/control behaviors as a  
421 significant predictor of interpersonal violence (Luo, 2018), which is consistent with a patriarchal  
422 ideology that justifies gender-based violence - men are viewed as superior to women in different  
423 social structures and there are norms and values justifying this superiority (Haj-Yahia, 2005).

424 Further, considering the associations between maladaptive coping and mental health,  
425 professionals need to develop efforts to prevent social isolation, promote victims' skills and  
426 resources on support seeking and restructure maladaptive coping beliefs. Victims' support  
427 services must develop interventions using a needs-oriented approach, considering the  
428 multiplicity of trajectories that are possible, and the specific needs of each victim in terms of  
429 vulnerability and protection. Finally, in order to assure that victims of interpersonal violence, and  
430 particularly women, benefit from qualified services, it is important to provide training  
431 opportunities to health professionals, assuring that they are able to develop the necessary skills to  
432 work with victims of violence (e.g., empathize with victims suffering, providing adequate  
433 support, and if necessary, referring the victim to other service; García-Moreno et al., 2015).

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