DOCTORAL (PhD) DISSERTATION

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THE EFFECT OF ADULT ATTACHMENT ORIENTATIONS ON INTRAPERSONAL AND INTERPERSONAL PROCESSES: TESTING SECURITY SCHEMA ACTIVATION

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The Effect of Adult Attachment Orientations on Intrapersonal and Interpersonal Processes:

Testing Security Schema Activation.

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To all insecurely attached adults who need to save their childhood.

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LIST OF ABBREVIATIONS

α	Cronbach's Alpha internal reliability index
ANX	Anxiety
ASI	Ambivalent Sexism Inventory
AV	Avoidance
B	Unstandardized regression coefficient or parameter estimate
β	Standardized regression coefficient or parameter estimate
BRS	Brief Resilience Scale
BS	Benevolent Sexism
CI	Confidence Interval
COVID19	Coronavirus Disease of 2019
df	Degree of Freedom
ECR-R	Experience in Close Relationships Scale- Revised
EFA	Exploratory Factor Analyses
FS	Felt Security
IPV	Intimate Partner Violence
IRI	Interpersonal Reactivity Index
IWMs	Internal Working Models
M	Mean
N	Number of Participants
NP	Neutral Prime
NTB	Need to Belong
p	P-Value

r	Pearson's Correlation Estimate
RSES	Rosenberg Self-Esteem Scale
SCC	Self-Concept Clarity
SCCS	Self-Concept Clarity Scale
SD	Standard Deviation
SE	Standard Error
SP	Security Prime
t	Independent Samples T-test Statistics
WEIRD	Western, Educated, Industrialized, Rich, Democratic
WSR	Willingness to Stay in the Relationship

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Note: Each author has granted permission for the given publication to be included in the current dissertation.

1. GENERAL INTRODUCTION

"From the cradle to the grave"

(Bowlby, 1979)

Attachment research is growing into the studies that investigate early attachment's (i.e., child-caregiver) effect on beliefs about the self, others, and the world as well as the guidance of these beliefs within interpersonal relationships. Even though Bowlby's (1969) work on attachment mainly focused on the infant-caregiver relationship (see Bowlby, 1973, 1987; Ainsworth et al., 1978), over the last two decades the dynamics of attachment through adulthood has been gaining attention (Hazan & Shaver, 1987; Mikulincer &Shaver, 2003). Bowlby, himself, also believed that attachment-related experiences have implications for social and emotional functioning across the lifespan. In other words, these experiences shape attachment-related experiences shape interpersonal functioning across the life course. Building on his ideas, Hazan and Shaver (1987) argued adult romantic relationships to be a function of attachment behavioral system that develops the emotional bond between infant and their caregivers.

Attachment orientations have been studied as a strong individual difference in adulthood that result in variety in everyday functioning (Mikulincer & Shaver, 2007). Indeed, several alignments on the attachment dimensions (that orient around anxiety and avoidance) are associated with the way people think, feel, and behave in close relationships throughout life (for a review, see Gillath et al., 2016). In this sense, attachment theory might be regarded as one of the useful frameworks to understand identity formation, self, affect regulation, cognitive appraisals, relational processes, attitudes as well as behaviors. What is more, working on attachment orientations are important because it is noted that only when relief is attained, and a sense of attachment security is restored can the individual deploy attention and energy to other behavioral systems and engage in non-attachment activities including sex, exploring, caregiving (Bowlby 1969/1982).

As addressed above, acquiring a sense of attachment security seems deeply connected with effective daily functioning. In this sense enhancement of attachment security via priming might be useful for improving psychological functioning and enhancing the quality of life through altering sense of security for the better. Activation of the attachment security schemas (i.e., mental representations) through exposing individuals to explicit or implicit attachment related cues to

make them feel more secure is thought to work by making attachment security related cues more readily accessible and available for mental processes, thus affecting individuals' emotions, cognitions, and behavior (Gillath et al., 2022; Mikulincer & Shaver, 2020).

Within the present dissertation we examined the associations between attachment orientations and intra (e.g., self-concept clarity, resilience, coping, empathy) as well as inter-personal processes (e.g., sexism, intimate partner violence), mainly focusing on appraisals of the self, others, and relationships, through four studies. Instead of handling individuals as belonging to different attachment categories, we followed the two-dimensional model (attachment anxiety dimension and attachment avoidance dimension) suggested by Fraley and colleagues (2015) (based on the work of Bartholomew and Horowitz (1991)), as they stated, "…If people actually vary continuously in attachment organization, but researchers assign people to categories, then potentially important information about the way people differ from one another is lost" (p. 355). It was expected that the findings of all the four studies might help us to understand the dynamics that lead to variety within affect, cognition, and behaviors in terms of everyday context. What is more, the present dissertation attempted to broaden our knowledge on the possible empowerment effect of the activation of attachment security schemas specifically within romantic relationship context. The aim of the dissertation will be outlined at the end of the General Introduction chapter, and the background and aim of each study will be described in more detail in the Introduction chapter separately.

1.1. Attachment theory: Basic concepts

Attachment theory is one of the leading theoretical frameworks for studying interpersonal as well as intrapersonal functioning and is central to the current work (Fraley & Shaver, 2018; Mikulincer & Shaver, 2019). Bowlby (1973) described the term "attachment" as the strong emotional bond formed between the infant and the primary caregiver. According to Bowlby (1982) people are born with an instinctual motivational system (i.e., attachment behavioral system, see Figure 1) to gain proximity with protective / significant others (i.e., attachment figures) during the times of actual or symbolic threat. Attachment figures can be listed as caregivers during childhood, adding peers during adolescence and including romantic partners during adulthood (Schachner et al., 2008; Umemura et al., 2017). An attachment figure serves as a reliable source for protection, comfort, support as well as the relief (i.e., *safe haven*); and a base to pursue non-attachment goals such as

exploring (i.e., secure base). Adults, similar to infants, respond to stress by seeking out an attachment figure in an attempt to restore emotional well-being (e.g., Simpson et al., 2012). In this respect, "separation distress" is experienced in response to attachment figure's real or anticipated disappearance, and individuals react with intense distress to actual or potential separations from an attachment figure. Bowlby also emphasized the innate fear that is associated with real or perceived rejection as well as the lack of attention from the attachment figure because of their significant role in relieving the fear related distress.

The set goal of attachment behavioral system is to attenuate distress and obtain a sense of security (what Sroufe & Waters, 1977 called *felt security*, FS). Gillath and colleagues (2016) remarked the parallels between the dynamics of attachment system and homeostatic control system because the set goal in each of the systems is continuous behavioral adjustment through constant monitoring of signals within the environment for inevitable danger and demands. From an evolutionary perspective, these dynamics help to ensure the individual's safety and protection, which increases the chances of survival as well as genetic reproduction. Bowlby listed proximity-seeking as the "primary strategy" of the attachment behavioral system which all individuals automatically engage in over threat appraisals and during the times of need for support. Once the threat is appraised there is, initially, a preconscious activation of the attachment system and individuals automatically access attachment related thoughts and action patterns. After the preconscious activation, conscious thoughts of proximity seeking arouse and results in actual proximity seeking behavior (Mikulincer & Shaver, 2016). What is more, according to Bowlby (1969/82) individuals are able to devote their time to other activities like exploring when they do not apprise any threat, that is, they do not engage in proximity seeking behaviors for the purpose of protection. If proximity seeking is activated, the individual can return to non-attachment activities when the FS is attained. When survival is considered, the goal to obtain FS seems to be an urgency that requires activation of the attachment system while inhibiting other behavioral systems.

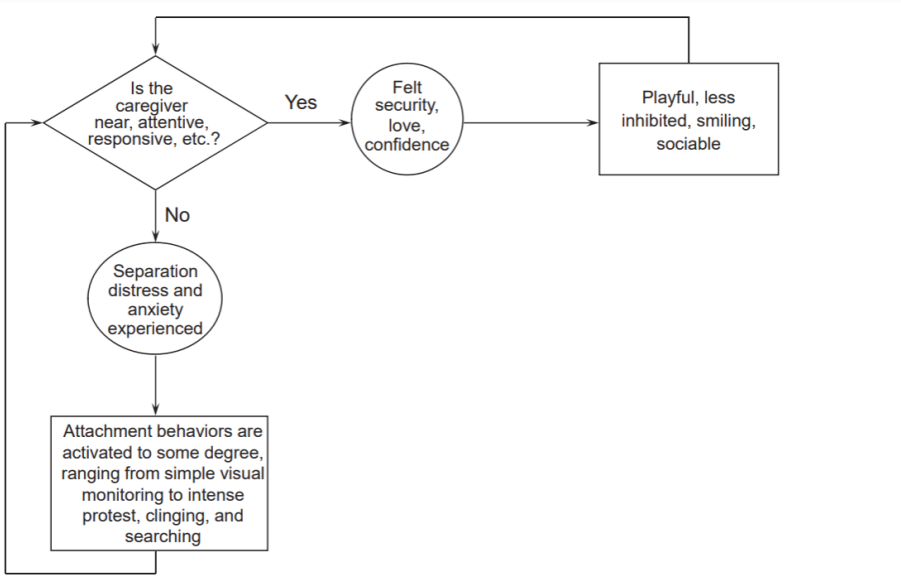

Figure 1. Bowlby's conceptualization of attachment behavioral system (Fraley &Shaver, 2000)

Bowlby (1962/89) framed the attachment system as a flexible goal-directed (referred also as goal corrected) behavioral system because in order to get the most effective action pattern in terms of gaining proximity and safety goal, individuals tend to evaluate their progress towards the goal and keep the action pattern or revise their behaviors if necessary. According to him, mental representations (which he then called Internal Working Models, IWMs) as forms of cumulative recollections of the interplay between the individual and the environment are fundamental aspects for the goal-corrected nature of attachment behavior system. That is, IWMs are cognitive frameworks consisting of mental representations of the world as well as of self and others. These mental representations are developed through the cumulative history of interactions with attachment figures, and they are used to estimate the likelihood of certain outcomes as a function of engaging in certain behaviors (see also Bartholomew & Horowitz, 1991). IWMs help to anticipate, interpret, and guide the reciprocal interactions. As Mikulincer and Shaver mentioned (2016) Bowlby preferred the term working models because "… (1) the models allow for mental simulation and prediction of likely outcomes of attachment behaviors (i.e., they provide context-sensitive representations of complex social situations); and (2) the models are provisional (in the sense of "working" drafts or changeable plans)."(p, 14). These models guide how information from the environment is appraised and play an essential role in behavioral patterns, thought patterns, and affect throughout the lifespan (Gilliath et al., 2016). What is more, the concept of IWM

highlights the role of early interpersonal experiences by means of internalization and personality development while providing a strong basis for the individual differences, IWMs also allow us to understand the developmental antecedents of these differences as well as the factors that contribute to their consistency across time. In the following chapters, we will provide more detailed information on IWMs and their association with interpersonal dynamics.

Although cognitive and behavioral patterns mentioned above are normative in a sense because they deal with universal features of attachment behavioral system, Bowlby, with contributions of Ainsworth and colleagues work (*the strange situation protocol*, 1978), acknowledged that there are individual differences regarding attachment system's operation. That is, individuals differ with regards to their appraisals of own internal state (e.g., distress, security), of the attachment figures' accessibility and regulation of attachment behavior in response to threats. As Cassidy (2008) mentioned in their work, although we all are born with attachment system along with the set goal of gaining FS through eliminating fear or distress, the attachment figure's responsiveness elicits individual differences in attachment system functioning.

Interaction with a primary attachment figure who is sensitive, responsive, and available to the proximity seeking efforts, is likely to result in experiencing FS (Bowlby, 1973). If the attachment figure proves not to be available, not responsive, or not good at providing a secure base in times of need, a sense of security cannot be attained. That is, even though there is an attempt by activating primary strategy, the set goal of the attachment is not accomplished. In such cases, the individual does not experience comfort, relief, or felt security. Rather, worries about one's value and others' intentions are strengthened, and insecure patterns of relational expectations, emotions, and behaviors (attachment orientation) are formed. These worries about self and others, and the resulting sense of vulnerability, can place the attachment system in a continually activated state, keep a person's mind preoccupied with threats and the need for protection, and interfere with the functioning of other behavioral systems (Bowlby, 1973). When primary strategy perceived as a failure, due to goal corrected nature of attachment behavior system individuals tend to adopt certain *secondary attachment strategies*; hyperactivation and deactivation of the attachment system (see Figure 1) (Cassidy &Kobak, 1988; Main 1990).

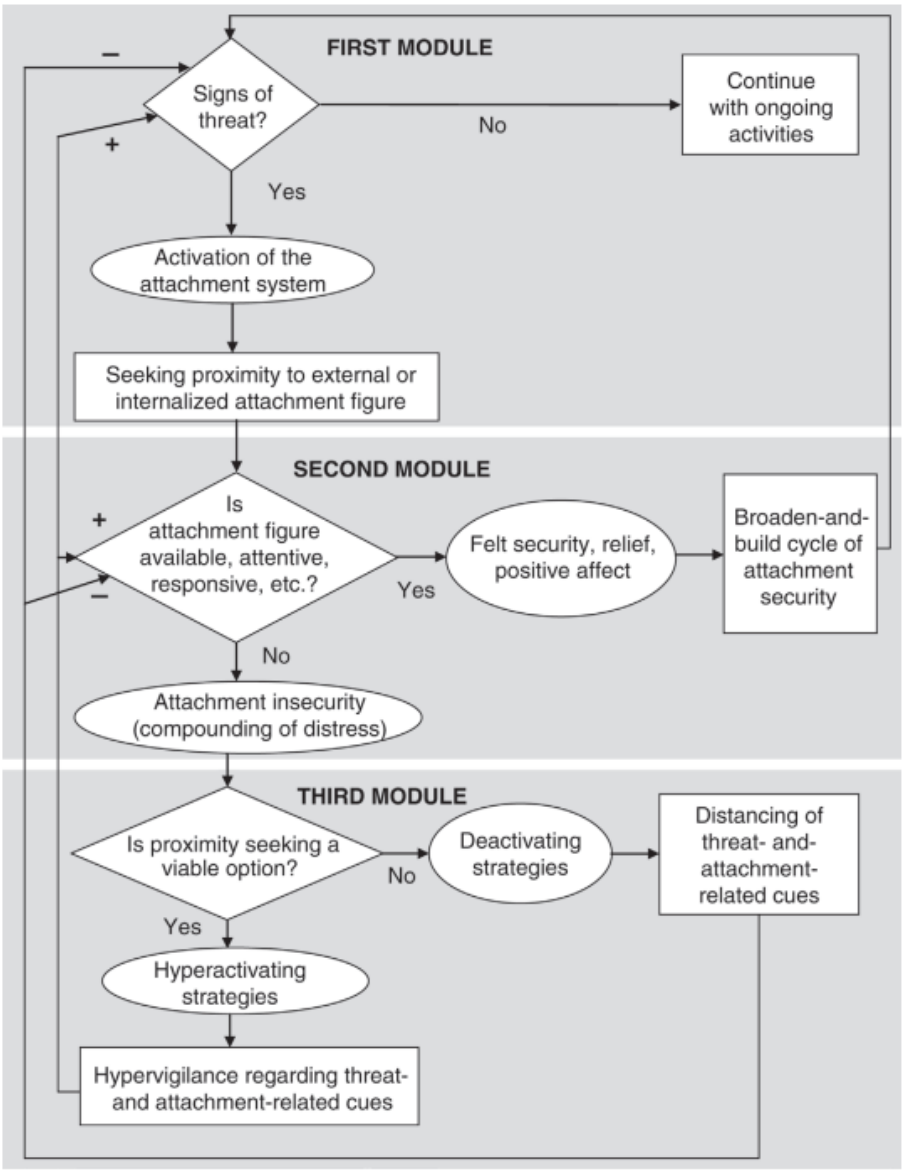

Figure 2. Model of attachment-system activation and functioning in adulthood (Mikulincer & Shaver, 2003)

Whether an individual needs to use secondary attachment strategies or not on a continuous basis and the preference for one of them is likely to indicate where the person stands on the continuous two-dimensional space (attachment avoidance and attachment anxiety). Attachment orientations are conceptualized as the regions on this space (e.g., Brennan et al., 1998). One dimension, attachment-related avoidance (or attachment avoidance) is characterized by the application of deactivating strategies. These strategies are developed over the perpetual attempts

to gain proximity with a caregiver that is constantly unavailable and unresponsive. Excessive reliance on deactivation strategies helps individuals high in attachment avoidance to divert their attention from attachment needs and attenuate the accessibility of related memories. This prevents spread of the activation from one such memory to another resulting in shallow attachment related information processing and difficulties in encoding information that is congruent with excluded cognitions and emotions. These individuals permanently downregulate their feelings and are reluctant to express them in order to avoid increased intimacy and emotional involvement. (Mikulincer & Shaver, 2016). In such cases the individuals tend to be compulsively self-reliant and independent instead of reaching others for help, support, or relief since they had to deal with the dangers and threats alone. The primary aim with the deactivation is to inhibit attachment needs in order to avoid possible frustration that might derive from the attachment figure's unavailability or rejection. The individuals high on attachment avoidance tend to have negative IWMs of others whereas ultimately positive IWMs of the self because they learnt to trust themselves only. Avoidant attachment is concerned with discomfort with closeness and depending on others and preference for excessive self-reliance as well as independence (Brennan et al., 1998; Hazan& Shaver,1987; Karantzas et al., 2010).

The second dimension, attachment related anxiety (or attachment anxiety) is featured with hyperactivation strategies. An inconsistent attachment figure that is responsive and provides support sometimes places the individual on persistent proximity seeking attempts since the set-goal of these attempts seem to be accomplished occasionally. These individuals have had repeated instances of ambivalent interactions with caregivers that can be distressing thus they are unsure of how to successfully get their attachment needs met. This uncertainty is reinforced over time and leads to developing an anxious attachment orientation. In such cases, instead of giving up, the individual intensifies and persists on the proximity seeking behaviors with the hope of gaining attention of the attachment figure in that instance. The primary aim with hyperactivation is to gain closeness with the attachment figure that could be accomplished once by exaggerating primary strategy. Individuals high in attachment anxiety tend to internalize the reason for the caregiver's inconsistency as a negative reflection on the self because they believe the primary attachment figure would provide constant responsiveness if they were sufficient enough and develop a negative IWM of the self (Griffin & Bartholomew, 1994). Attachment anxiety is associated with strong desire for closeness and protection, low self-worth, hypersensitivity for attachment

experiences, excessive fear of abandonment and hypersensitivity to rejection (Brennan et al., 1998; Karantzas et al.,2010; Hazan & Shaver, 1987). Individuals with greater attachment anxiety are preoccupied with their relationships and tend to put a strong emphasis on their vulnerability, helplessness, and dependence with the hope of gaining attention and love of the attachment figure (Cassidy & Shaver, 2016). Compulsive reliance on hyperactivation leaves individuals with heightened possibility of emotional and adjustment problems through increasing the accessibility as well as intensity of threat-related thoughts and emotions as well as impairing their ability to regulate negative emotions. What is more, individuals high in attachment anxiety tend to process the information focusing on the affective aspects to actively seek implications of abandonment or rejection. As a result, even though they acquire responsiveness and care from the attachment figure their distress tends to continue and sense of security becomes hard to attain.

Individuals who score relatively low on both dimensions (who are high in attachment security) are said to have a strong sense of security. They trust the attachment figures, expect availability and responsiveness from their partners and they are comfortable with both closeness and interdependence. Growing up with responsive, attentive, and available caregivers, individuals high in attachment security are able to concentrate on other life tasks more compared to their counterparts low in attachment security who need to spend excessive time and energy on the worries about the availability of the attachment figure (i.e., attachment anxiety) or on repressing attachment related needs (i.e., attachment avoidance) (Mikulincer & Shaver, 2016).

Researchers have been shifting their attention to the question of whether individual differences in terms of adult attachment are matters of kind (i.e., categorical) or matters of degree (i.e., continuous). Bartholomew and Horowitz (1991) provided a model where they suggested four different attachment styles (secure, preoccupied, fearful, dismissive) with respect to two major dimensions (positive/negative IWMs of the self/others, see Figure 3) what modern researchers often refer to as attachment anxiety and attachment avoidance (e.g., Brennan et al., 1998). Even though their work grouped individuals in four different attachment categories, stemming these categories from two dimensions led research within this area to evolve around dimensional model (see Figure 4) and provided basis for testing individual differences as variations along these two dimensions in a continuous manner which we also followed in our research. Fraley and colleagues (2015) revisited this issue and based their study on taxometric analyses (Meehl, 1995), which is a

useful method to understand if a construct is categorical or dimensional, to test the optimal model regarding this question once more (see Fraley &Waller, 1998). Using multiple samples and measures (e.g., the strange situation, self-report measurements for adult attachment, and the adult attachment interview) these authors concluded that the variation in attachment might be best modeled with dimensions rather than types regardless of the level of specificity (e.g., global or specific) and the type of relationship (e.g., parental or romantic)(see Fraley & Spieker, 2003; Roisman et al., 2007). In light of these findings, we followed the trend regarding dimensions versus styles and used the revised version of Experiences in Close Relationships scale (ECR-R, Fraley et al., 2000) to measure individuals' variation in attachment security in a dimensional fashion. This scale consists of two subscales where one represents attachment anxiety and the other represents attachment avoidance dimension. The developers of ECR-R suggested using "low" ends of attachment anxiety and attachment avoidance dimensions to extract security levels of the individuals in case researchers are specifically interested in how secure an individual is.

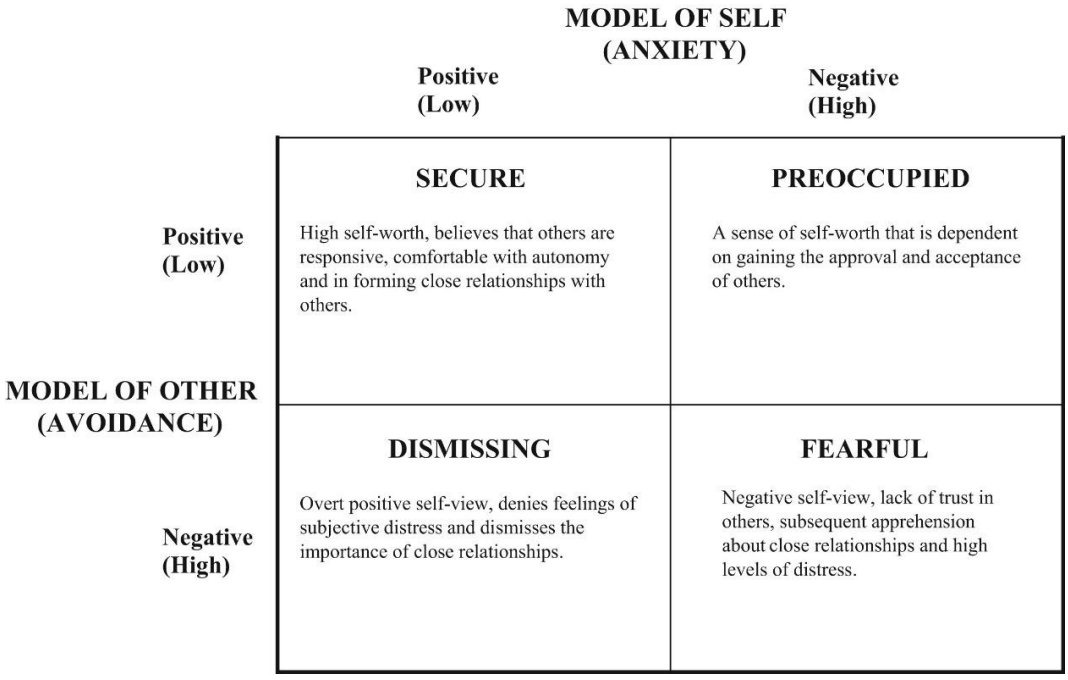

Figure 3. Bartholomew and Horowitz′s (1991) model of adult attachment

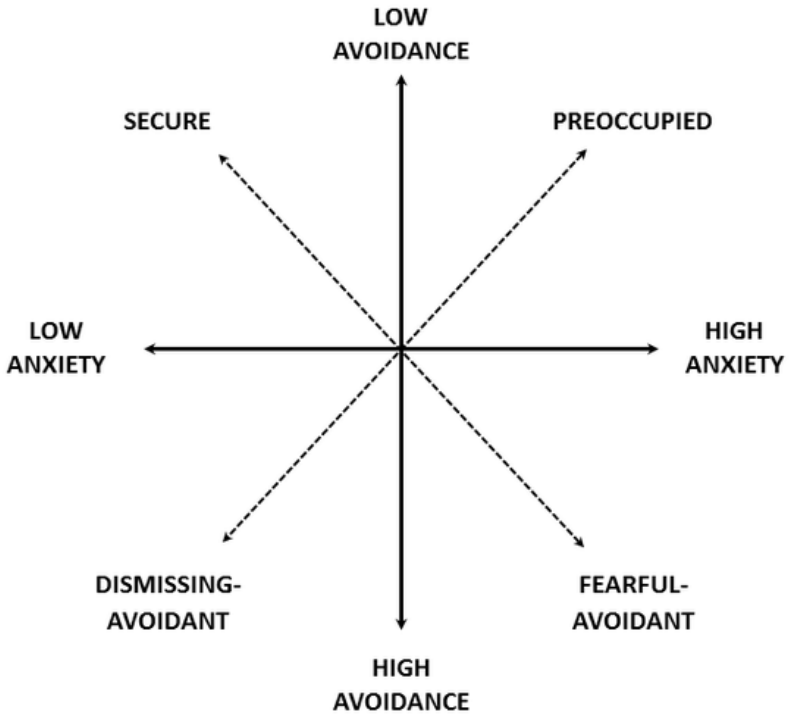

Figure 4. The two-dimensional model of attachment

1.2. IWMs as a dynamic underlying various intra/interpersonal process.

IWMs have been associated with several intra and interpersonal processes. We review only the ones that are relevant to the research included within the present dissertation in the following sections. For a more extensive review see Cassidy and Shaver (2016), Gillath and colleagues (2016), and Mikulincer and Shaver (2016).

Research on IWMs handles attachment orientations as the outcome of the differences in cognitive contents and functioning of attachment-related mental representations (Collins & Read, 1994). When attachment system activated preconsciously, availability of attachment related mental representations increases. These representations are then used in information processing and action automatically. Hence, prior to acknowledging the thought patterns and action plans consciously, individuals' mental representations influence them. Indeed, IWMs guide interpersonal behavior and reflect the underlying regulatory systems of attachment strategies and they allow an individual to predict the nature of the relationships and adjust proximity-seeking attempts (e.g., is primary strategy enough?) throughout their life. They can bias the ways in which

an individual cognitively encodes, interprets, and stores memories of interactions with attachment figures and can shape their emotions within daily life. IWMs provide direction for present actions and assist individuals to anticipate future interactions based on previous experiences to generate roadmaps for attaining desired goals (Bowlby 1969/82, 1980). That is, IWMs are the available schemas and the more frequently an available schema is activated, the more accessible it and its elements become in response to relevant environmental cues in the future. Bowlby (1988) mentioned that internalized attachment related patterns leading IWMs to form tend to affect new relationships "…despite the absence of fit" (p. 127, 170). IWMs. Basically, we can summarize IWMs as consisting of four main elements; (1) memories, (2) beliefs, attitudes, and expectations, (3) goals and needs, and (4) plans and strategies (Collins et al., 2006).

Mental representations can be activated by actual or imagined encounters with supportive or unsupportive other people even if they are incongruent with a person's dominant or overall attachment orientation (Mikulincer & Shaver, 2016). With age and experience, individuals seem to benefit from mental representations of a responsive attachment figure in terms of creating a sense of safety and security, without seeking physical proximity to them. In other words, activation of a secure attachment figure's representations helps individuals to deal with threats independently.

Individuals vary in the degree to which they hold positive or negative views of themselves and others. Research on the associations between attachment orientations and model of self has mainly focused on the individual's appraisals of the self (e.g., self-esteem, self-efficacy) and the cognitive process of these appraisals (e.g., attributions on self-related information). Greater self-esteem (i.e., perceptions of self-worth) and self-efficacy (i.e., sense of self-competence) levels are related to higher attachment security levels. Repeated responsive and sensitive caregiving sequences lead these individuals to have positive IWMs about the self. These individuals believe they are worthy of love, and they trust themselves with the support they received while exploring novel stimulus. On the other hand, attachment anxiety (having negative model of the self) is negatively associated with both self-worth and self-efficacy (e.g., Gentzler & Kerns, 2004; Strodl & Noller, 2003).

Regarding attachment avoidance (having positive model of self), individuals with greater attachment avoidance tend to report higher self-esteem or self-efficacy than individuals high in attachment anxiety (e.g., McCarthy, 1999). There appears to be no difference between attachment

security and avoidance in terms of self-esteem and efficacy even though they have different and conflicting development patterns. Mikulincer and Shaver (2005; 2007) explained this similarity with individuals high in attachment avoidance using "defensive self-enhancement." Individuals high in attachment avoidance tend to compulsively rely on self, due to consistent rejection and neglect from the attachment figure as well as being forced to cope with stressors on their own in early years. Defensive self-enhancement is thought to emerge as a function of these patterns.

Regarding the IWMs of others compared to their secure counterparts, individuals high in attachment avoidance are predisposed to view others as untrustworthy, rejecting, and hurtful whereas individuals high in attachment anxiety tend to perceive others as less supportive, faithful, and dependable. That is, individuals who grow up with insufficient or inconsistent caregiver (i.e., attachment anxiety), or experience constant rejection (i.e., attachment avoidance) may develop negative views of others and appraise others as untrustworthy. These individuals, as a result, perceive the world to be a lonely and unwelcoming place (e.g., Bartholomew & Horowitz, 1991; Kirkpatrick & Davis, 1994).

However, individuals high in attachment anxiety tend to adopt positive view for their inconsistent attachment figures as "stronger" and "wiser" compared to self, through attributing the reason for the inconsistency to negative beliefs of the self (e.g., "if I was good enough, my caregiver would support me"; "Others need to help me since I am not as qualified as them to deal with problems") even though they do not trust these figures Basically, higher levels of attachment anxiety leave these individuals with excessive need for proximity while having heightened concerns about abandonment as well as being worthy enough to be loved. The hypervigilance for rejection clues and excessive fear of abandonment strengthens negative expectations from attachment figures with their conflicting IWMs of the self and others, individuals high in attachment anxiety often have ambivalent feelings for relationships and, in turn, unhealthy relationship functioning (MacDonald et al., 2013; Mikulincer et al., 2010)

1.2.1. Coping

Coping is a complex, multidimensional process that is defined as "constantly changing cognitive and behavioral efforts designed to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141). Compas et al. (2001) define coping as a dynamic process by means of which individuals adapt to

stress and adversity. It includes emotion management, the regulation of thought processes and behavior as well as action on the environment, in order to alter or decrease stress. In this sense coping resembles the formation as well as the functioning of IWMs. There are two main coping strategies: problem-focused coping and emotion-focused coping (Lazarus & Folkman, 1984). Problem-focused coping consists of attempts to solve a problem directly while seeking information about it in order to attenuate distress, whereas emotion-focused coping involves a shift of attention towards emotions, either to express or suppress them, without actively focusing on the problem itself. Problem-focused coping strategies (e.g., the gathering of information or planning) are utilized when the individual trusts their abilities to lessen the effects of the stressor(s), whereas emotion-focused coping strategies are implemented when the individual perceives themselves as incapable of dealing with the stressor or perceives the stressor to be something that cannot be altered and to be endured.

Individuals with high attachment security tend use problem-focused coping strategies (e.g., Abraham & Kerns, 2013), whereas individuals high in attachment anxiety or avoidance tend to be more reliant on emotion-focused coping strategies (Pascuzzo et al., 2013). Attachment security is known to facilitate personal adjustment in the presence of adversities through constructive, flexible, and reality-attuned coping efforts (Mikulincer & Shaver, 2007). Securely attached individuals appraise their ability to cope with stressful situations more positively and constructively, whereas individuals high in attachment avoidance inhibit their reactions to stressors and do not take advantage of social support as a form of coping (Mikulincer & Florian, 1998). On the other hand, individuals high in attachment anxiety are hypervigilant; they overreact to stressors and tend to utilize maladaptive coping behaviors such as focusing on their feelings (instead of the problem itself), exaggerating the seriousness of the problem, and rumination (Berry & Kingswell, 2012; Mikulincer et al., 2003). Previous research on the regulation of negative emotions which arise from hypersensitivity for threats among individuals high in attachment anxiety showed ineffective coping mechanisms such as greater rumination and amplification of felt distress (Mikulincer & Florian, 1998; Simpson & Rholes, 2012).

1.2.2. Resilience

Resilience is considered as a skill that helps maintain positive adaptation and normative functioning in individuals who are going through significant or severe adversities (Fletcher &

Sarkar, 2013; Jenson & Fraser, 2015). Among the individual differences that have been found to be associated with resilience are beliefs, coping strategies, identity characteristics as well as attachment orientations (Craparo et al., 2018; Guo, 2019; Pellerone et al., 2016). Resilience is also explained as "a stress-resistant attitude, related to the appraisal of oneself as able to cope with stressors" (Karreman & Vingerhoets, 2012, p. 821). The assessment of stressful situations and one's own competence to cope with them is affected by the manner of self-appraisals (e.g., negative or positive IWM of the self) and habits of reacting to adversities (e.g., secondary attachment strategies) are among personality determinants of resistance to stress (Huber, 2010 as cited in Pudlo-Komorowska, 2016).

According to Leipold and Greve (2009) threats and challenges activate regulatory or coping processes that enable the individual to deal with the respective threat or challenge. Following this approach, Guo (2019) suggested conceptualizing resilience according to the stability or progressive changes resulted from the coping processes. In this respect, coping strategies that are engaged in the face of stressors might impact resilience.

Previous research has indicated that attachment security is associated with problem-focused coping (Villasana et al., 2016), and that this coping strategy predicts resilience (Guo, 2019). On the other hand, Pascuzzo and colleagues (2013) found attachment anxiety to be closely connected to the use of emotion-focused coping strategies; while Karreman and Vingerhoets (2012) showed emotion-focused coping strategies to be related to poor resilience. In other words, higher attachment security level is likely to direct individuals towards using effective coping strategies and, at the same time, increases their resilience by predisposing them towards flexibility in response to adversities (see Aim 1).

1.2.3. Self-concept clarity

Self-esteem has repeatedly been reported as being positively associated with Self-Concept Clarity (SCC) in the relevant literature (e.g., Suszek et al., 2018). Campbell et al. (1996) defined SCC as "…a structural aspect of the self-concept: the extent to which self-beliefs are clearly and confidently defined, internally consistent, and stable" (p.141). Mikulincer (1995) indicated attachment anxiety and attachment avoidance interfering with the development of self-concept. Self-verification through feedback helps individuals to affirm their sense of self, that is, close others are crucial for the development of SCC (Emery et al., 2018). In this sense, it is important to

have well-developed social skills and will to form relationships with others to have a clear understanding of the self. Since attachment anxiety and avoidance both result from and contribute to impaired interpersonal relationships, benefiting from close relationships to maintain a clear sense of self may be challenging for individuals high in either of them.

In this manner, although individuals with high attachment avoidance tend to have high self-esteem (Bartholomew & Horowitz, 1991; Mikulincer, 1995)—which fosters SCC (Kawamoto, 2020)—they may still experience lower SCC since they demonstrate less interest in forming relationships, are reluctant to self-disclose, and do not trust others. On the other hand, although individuals high in attachment anxiety form close relationships with others unlike their avoidant counterparts, they may still experience low SCC since they have low self-esteem, aspire as well as tend to merge with close others, and have an intense fear of separation. Fear of separation and excessive lust for closeness seem to predispose individuals high in attachment anxiety to alter their self-concepts often that results in a less stable self-concept and greater confusion over it (Mikulincer & Shaver, 2007; Slotter et al., 2010).

Additionally, individuals high in attachment security do not tend to perceive others in a way that is biased either toward too much similarity with the self (unlike attachment anxiety) or too much distinction (unlike attachment avoidance) from the self. Therefore, besides the social skills and positive working models for others, attachment security tends to enhance self-concept clarity through authentic and honest views of the self (Gillath et al., 2010).

1.2.4. Empathy

As attachment orientation–based schemas (IWMs) are thought to persist throughout adulthood (Cassidy & Shaver, 2016; Mikulincer & Shaver, 2016), attachment-related experiences (IWMs) structure social cognitive processes (Hünefeldt et al., 2013) and the pattern of early interactions with the caregiver influences the individual's trustworthiness as well as responsiveness to other people in the social world later in life (Bowlby, 1973, Bowlby, 1988), thus individual differences in terms of empathy may stem from attachment orientations (see also Stern & Cassidy, 2018). Davis (1983) classified empathy into two main components. The cognitive component includes adoption of perspective whereas the affective component includes empathic concern and personal distress. Empathic concern involves feeling as well as responding with compassion toward a person in distress (Mehrabian & Epstein, 1972), whereas personal distress involves discomfort and

anxiety, which is a self-focused response to witnessing the negative experiences of others (Batson, 1997).

Individual differences regarding self-other distinction (Theory of Mind, ToM, Baron-Cohen, 1991; see also Boag & Carnelley, 2016) and modelling (social learning theory, Bandura & Walters, 1977) might be useful for explaining the attachment orientations-empathic development association. A good-quality relationship that fosters reflective functioning between the child and the primary caregiver (a requirement for the development of attachment security) is a key aspect for the ability to distinguish the self from other and to understand that others have different perceptions, beliefs, desires, and internal states from one's own. (e.g., Bloxsom et al., 2021; Boag & Carnelley, 2016). On the other hand, having experienced inconsistency, insensitivity, or a lack of care from an attachment figure who was unable to model and enhance empathic responses or promote the ability to differentiate between the self and others, individuals with low levels of attachment security may have been deprived of opportunities to witness, internalize, and imitate empathic behavior. Ineffective mirroring of the child's emotional state and experiences interferes with the development of mentalization through reduced stimulation of reflective capacity (Dewitte et al., 2019) and individuals tend to have a limited ability to acknowledge the feelings of others if they lack stable, sensitive, and reliable care from their primary caregiver (as in the case of attachment anxiety or avoidance) (Mikulincer, 2005).

A sense of security (stemming from attachment security) and positive IWM of the self has been recognized as allowing an individual to be confident in their ability to deal constructively with their own or other's distress, and as predisposing them to experience such feelings as a challenge rather than a threat. In turn, such individuals tend to have an increased capacity to be open, sensitive, and responsive to others' pain (Cassidy et al., 2018; Mikulincer & Shaver, 2015; Shaver et al., 2017). The negative IWMs of the self (attachment anxiety) and others (attachment avoidance) may be conducive to self-concern, self-protection, defensive rejection of others' needs, and misguided efforts to understand and help others (Mikulincer & Shaver, 2016; Shaver et al., 2017). For example, in earlier research, attachment avoidance has been linked to low empathic concern (Joireman et al., 2001), while attachment anxiety has been associated with high personal distress (Britton & Fuendeling, 2005; Joireman et al., 2001) and low empathic concern (Britton & Fuendeling, 2005).

A strong, stable, and clear sense of self (i.e., SCC) may allow individuals to empathize with others in distress, while leading to a conscious awareness of and distinction between their own and others' emotions. The development of SCC might depend on the attachment dynamics with the primary caregiver. Numerous earlier studies have examined empathy through attachment (e.g., Khodabakhsh, 2012; Stern & Cassidy, 2018) and SCC (e.g., Kállai et al., 2019; Krol & Bartz, 2021). To the best of authors' knowledge there have been no studies examining the role of SCC (see Aim 2/a) and attachment orientations (see Aim 2/b) on empathy within a non-Western sample, and the possibility that the relationship between attachment and empathy might be influenced by a clear sense of self (see Aim 2/c).

1.2.5. Relationship needs and partner preferences

Regarding relationship needs we will cover the individual differences stemming from attachment orientations regarding the need to belong (NTB, which is used interchangeably with fear of abandonment) and the appeal of benevolent sexism (BS) specifically for attachment anxiety.

Baumeister and Leary (1995) proposed that "human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships" (p. 497). Although NTB is a fundamental motivation, the strength of that motivation differs among individuals (Leary et al., 2006), thus we handled NTB as a trait (i.e., we took belonging to be a core psychological need; Allen et al., 2021). For example, individuals who experienced inconsistent care from their caregivers (i.e., individuals with high attachment anxiety) tend to have a greater fear of rejection as well as greater concerns regarding acceptance compared to counterparts whose caregivers provided consistent affection (Bowlby, 1969; Mikulincer & Shaver, 2007). Because of the relationship patterns these individuals experienced throughout their developmental years lacked continuity of care, affection, and trust, their NTB has never been fully satisfied. In this sense, elevated levels of NTB, the enhanced pursuit of its satisfaction, and the fear of losing acquired relationships is likely to endure adulthood and guide interpersonal relationships including partner preferences (see also Lavigne et al., 2011). In addition, such individuals have an intense need for relationship security—for example, men who endorse benevolent sexist attitudes, which promise investment in the relationship as well as the partner, seem to strongly appeal to women with high attachment anxiety (Cross & Overall, 2018).

Benevolent sexism presents a romantic relationship script according to which women are nurturing, loyal, and caring and prioritize their relationship as well as their partner in a way that complements men's competence and strength (complementary gender differentiation). In return, men are supposed to protect and provide for women and invest in the relationship (protective paternalism), since men are dependent on women to fulfil their intimate relationship needs (heterosexual intimacy; Glick & Fiske, 1996) chivalrously and devotedly. BS places emphasis on men's obligation to cherish, protect, and provide for their female partners. Accordingly, men are assigned role-based responsibility and an obligation to be the devoted protectors and providers of their female partners (Chen et al., 2009; Glick & Fiske, 1996). Because the deeply rooted fear of abandonment within attachment anxiety often results in hypervigilance for cues of the partner's potentially wavering commitment (Guerrero, 1998), and individuals high in attachment anxiety tend to be highly invested in their relationships, which can lead to perceiving that there is more at stake when encountering relationship threats (Etcheverry et al., 2013), the *permanence* of men's reverence, protection, and provision may be seen as guaranteeing security in heterosexual relationships. Indeed, according to this conceptualization, women who perceive their male partners as endorsing BS believe that their partners will prioritize the relationship, can be relied on to remain invested in the relationship, and will adhere to their obligations to be devoted partners (Hammond et al., 2016). What is more, demonstration of greater commitment from the partner is likely to reduce preoccupation with partner's acceptance and love among individuals with high attachment anxiety levels (Overall &Simpson, 2015).

Constant fear of abandonment leaves individuals high in attachment anxiety fixated on obtaining reassurance of their partners' love and commitment due to their heightened need for relationship security (Overall et al., 2014; Shaver et al., 2005). Attachment anxiety is associated with greater vigilance for potential signs of the partner leaving, which manifests as having a lower threshold for detecting potential threats to continuity of the relationship (Mikulincer & Shaver, 2019) In that vein, Leary et al. (2013) found that high NTB is also related with greater fear of rejection. The NTB is deeply rooted in IWMs and internalized as negative views of own abilities to meet core needs and more positive views of others' abilities to fulfil them (Gillath et al., 2016; Hazan & Shaver, 1987). Hammond and Overall (2015) showed that men who more strongly endorsed BS tended to provide their partners with more dependency-oriented support by offering direct advice and instruction and discounting their partners' abilities to pursue personal goals on

their own. In this respect a partner who have BS attitudes might be a tool to self-verification as being incompetent among individuals high in attachment anxiety. High NTB levels, similar to attachment anxiety (Mikulincer & Shaver, 2016), associates with greater sensitivity to interpersonal cues because people who desire social acceptance pay attention to information that will help them foster connections with others (Pickett et al., 2004). What is more, individuals high in NTB tend to worry about how they are valued by others, fixate on interpersonal relationships, and put a great deal of effort into sustaining them (Leary et al., 2013). This resembles the hyperactivation strategies in which individuals who are high in attachment anxiety automatically engage.

Allen et al. (2021) suggested social competencies as the set of skills that are crucial for connecting and experiencing belonging with others. These skills may help individuals to use socially appropriate behaviors to increase opportunities to satisfy NTB (Blackhart et al., 2015). They also may assist individuals to cope effectively should feelings of not belonging arise (Frydenberg et al., 2009). The ability to regulate emotions, for example, may reduce the likelihood of social rejection or ostracization from others (Mao et al., 2018). On the other hand, perceptions related to the experience of belonging also play a significant role in NTB. An individual may appear to have all the means to satisfy NTB but may still be dissatisfied due to their perceptions of the relationship, self, and others (Allen et al., 2021; Walton & Brady, 2017). Being high in attachment anxiety interferes with emotion regulation, perception of the relationships as they are and social competences Individuals high in attachment anxiety tend to use hyperactivation strategies (i.e., excessive attempts to gain proximity) to keep a partner close, which are likely to elicit distancing attempts by the partner in response to what they perceive as clinging behavior (Gillath et al., 2016).What is more, individuals with higher attachment anxiety levels tend to underestimate the love and support they receive from their partners (Collins & Feeney, 2004), feel less secure and calmed by responsive partner behavior (Simpson et al., 2007), and doubt that committed partners will remain devoted and invested in the future (Collins et al., 2006).

Baumeister and Leary (1995) highlighted one feature of NTB that may be closely related to attachment anxiety and a preference for BS in a potential partner. According to this feature, the individual needs to perceive that an interpersonal bond or relationship is marked by *stability*, *affective concern*, and *continuation into the foreseeable future*. In other words, NTB requires the

perception of an ongoing, interactive, long-lasting relationship and bond, and the belief that the significant other cares about the individual's welfare while showing affection. Baumeister and Leary (1995), for example, noted that while bond formation is the initial step that provides positive affect, NTB is fully satisfied and provides higher levels of joy when the bond is formalized into a more recognizably permanent status such as marriage.

Benevolent sexism facilitates men's structural power and maintains the gender status quo by framing men as more competent than women (Delacollette et al., 2013; Ramos et al., 2018), while individuals who endorse BS support beliefs that justify the system (e.g., men are more capable and thus make better leaders; Russo et al., 2014). Research has shown that exposure to, as well as endorsement of, benevolent sexist attitudes undermine women's interests in terms of obtaining personal power and independence, their performance in cognitive tasks, their self-esteem, and their self-efficacy in the workplace (Dardenne et al., 2007; Jones et al., 2014). In this sense we believed it is important to investigate individual differences that predispose women to partners that endorse BS attitudes. Based on the existing indirect evidence indicating that individuals high in NTB may also be high in attachment anxiety and, as a result, are more likely to look for a potential partner who holds benevolent sexist attitudes compared to individuals with low NTB we run two studies within the third research included here (see Aim 3/a, 3/b).

1.2.6. IPV and persistence on an abusive relationship

The Center for Disease Control and Prevention define intimate partner violence (IPV) as "physical violence, sexual violence, stalking and psychological aggression (including coercive tactics) by a current or former intimate partner (i.e., spouse, boyfriend/girlfriend, dating partner, or ongoing sexual partner)" (Breiding et al., 2015, p. 11). IPV is commonly repetitive and its severity as well as frequency tends to increase along with the duration of the relationship (Cochran et al., 2011). In this sense, staying with an abusive partner might increase the risk for (re) victimization and knowledge about the risk factors that contribute to women having repeated experiences of IPV is relatively scarce (Smith & Stover, 2016). Besides the cumulative nature of IPV, victims of IPV are subject to physical as well as mental health consequences, including depression, generalized anxiety disorder, post-traumatic stress disorder, inability to work, unwanted pregnancies, miscarriages, and bruises (Anderson, 2008; Cavanaugh et al., 2012).

Studies have shown that many of the individuals who experience IPV demonstrate insecure attachment orientations (Ogilvie et al., 2014; Ponti & Tani, 2019), and these orientations predict both the perpetration of IPV and IPV victimization (Bélanger et al., 2015). There is therefore a risk that, as a result of insensitive and inconsistent caregiving, an individual will inherit inappropriate levels of both giving and receiving care, including overdependency or under-involvement behaviors. For example, because of their disturbed affect regulation and cognition, men with high attachment anxiety tend to use IPV as a tool to provide proximity when their fear of loss is activated (Barbaro et al., 2019). Higher levels of attachment anxiety, on the other hand, have been linked to recurrent IPV victimization among women, as it leaves women with a wide range of relational vulnerabilities (Velotti et al., 2018). As attachment anxiety predisposes women to fear separation and abandonment, women high in attachment anxiety have difficulty leaving abusive relationships (Allison et al., 2008; Finkel & Slotter, 2007; Henderson et al., 2005; Shurman & Rodriguez, 2006). Doumas et al. (2008) stated that individuals high in attachment anxiety tend to tolerate violence as a tool to provide proximity—that is, negative treatment might seem more endurable by individuals high in attachment anxiety over perceived emotional distance, separation threats, or actual disengagement.

Furthermore, IPV may function as a tool of affirmation/validation for individuals with high attachment anxiety in terms of their IWMs. As Sandberg et al. (2016) stated, for individuals high in attachment anxiety, a caring and loving relationship might seem unattainable. Such a belief and predominant IWM of the self as unworthy or undeserving of love may "justify" the abuse directed at these individuals by themselves (Henderson et al., 2005). In their study on IPV, childhood maltreatment, attachment styles, and depressive symptoms among women, Smagur and colleagues (2018) reported that women interpret IPV in a way that is congruent with their negative working models of the self, and that IPV maintains IWMs that result from childhood maltreatment. Even though adult attachment theory is widely applied in this field of research, comparatively few studies have been carried out on victimization and attachment. Regarding the studies covered in this section we believed that it is important to focus on dynamics that lead IPV victims to stay with an abusive partner and due to the relational nature of IPV we investigated persistence with an abusive partner within the framework of attachment theory (see Aim 4/a).

1.3. Activating attachment security schemas

Mikulincer and Shaver (2016), in their adult attachment model, mentioned Waters and Waters' (2006) "secure-base script" (p.185) as the organization of attachment security's mental representations and they explained the script with an if-then proposition (2020); "If I encounter an obstacle and/or become distressed, I can approach a significant other for help; he or she is likely to be available and supportive; I will experience relief and comfort as a result of proximity to this person; I can then return to other activities" (p.23). Continuous experiences that strengthen this script as well as positive interactions with responsive attachment figures foster the broaden and build cycle of attachment security (Fredrickson, 2001). As a result, individuals' resilience levels heighten and their capabilities as well as perspectives increase which make confronting threats and challenges easier, with optimism and hope (Mikulincer & Shaver, 2016).

Attachment security priming (also known as secure base priming or security priming) involves the clinical or experimental activation or inducement of attachment (felt) security using various explicit or implicit methods, including guided visualizations, recall, and the presentation of visual stimuli (Mikulincer & Shaver, 2015; Norman et al., 2015).One of these methods is exposing people subliminally or supraliminally to attachment security related words (e.g. love, hug, affection, support, the name of secure attachment figure) or pictures representing attachment security (e.g. a crossword puzzle, such as a mother hugging a child, respectively). The other widely used method includes asking participants to recall memories of having a reliable attachment figure and being loved and supported by them or asking people to imagine such scenarios or relationships. (Gillath &Karantzas, 2019). Then, through the process known as 'spreading activation' semantic and affective nodes are activated producing a sense of security akin to that induced by the presence of supportive others who provide love, comfort, and security. Attempts to enhance the secure script are based on the assumption that attachment orientations might move across the two attachment dimensions with specific attachment figures (Baldwin et al.,1996). The potential for malleability of attachment orientations across contexts (e.g., Chopik et al., 2019; Mikulincer & Shaver, 2019) allows the possibility that an insecure individual can experience relatively greater security with a particular attachment figure.

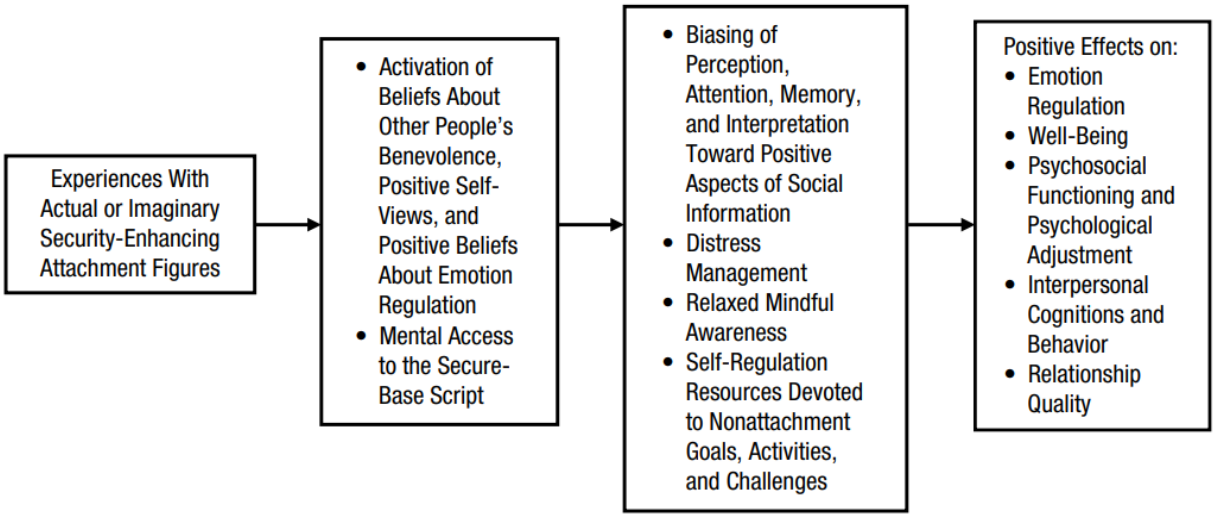

Figure 3. The theoretical cascade of mental processes involved in the broaden-and-build cycle of attachment security (Mikulincer &Shaver, 2020).

Accordingly, Roisman and colleagues (2002) concluded that "earned secure" individuals perform as well as "secure" (i.e., those who are secure from infancy). Also, these authors mentioned that "earned secure" individuals are not only able to overcome their childhood negative experiences, but in applied contexts (relationship break-ups, parenting of their own kids) they perform as well as their "secure" counterparts. Basically, activating security schemas has been applied to understand formation of IWMs as well as the cognitive substrates of attachment-related affect and behavior (Weingarten et al., 2016). Research has shown that attachment security priming has direct and indirect positive impacts. Indeed, Norman et al. (2015) found that attachment security priming modulates the threat-related amygdala reactivity which enhances anxiously attached individuals' fixation on the threat of separation. Evoking secure schemas also found to attenuate state paranoia and anxiety (Sood et al., 2022). Accordingly, security priming has been shown to increase attachment security (Lin et al., 2013) which is associated with balanced self-representation (e.g., Psouni et al., 2015), engagement in constructive coping (Psouni & Apetroaia, 2014), self-compassion, and resilience (Oehler & Psouni, 2019). What is more, these priming methods have been shown to be associated with mood and attitudes toward novel stimuli (Mikulincer et al., 2001) including reactions to out-group members (Mikulincer & Shaver, 2001) as well tendency to outgroup humanization (Capozza et al., 2022).

Furthermore, researchers have demonstrated that security priming alters attachment anxiety, relationship expectations, and views of the self, strengthens compassion and altruism as well as physiological reactions to perceived threats (Carnelley & Rowe, 2007; Gillath et al., 2005; Gillath et al., 2022; Mikulincer et al., 2005; Norman et al., 2015; see also Park, 2016). These mental representations of attachment security leads to effective coping skills, mutually satisfying social interactions, high self-esteem, and emotional stability. That is, security enhancing has positive effects on appraisals of self and others which might interfere with excessive need for relationship security as well as ideal future partner preferences among individuals high in attachment anxiety. In this sense the suggested preference for an ideal partner that holds BS attitudes might decrease. Following the indirect evidence (e.g.., more positive views of the self and less fear of rejection) we proposed and worked on the effect of evoking secure schemas through priming method on NTB and preference for benevolently sexist partners (see Aim 3/c).

Additionally, indirect evidence (i.e., more positive views of the self and less attachment anxiety, Carnelley & Rowe, 2007) suggests that enhancing attachment security may indeed serve as a technique to enhance the rejection of an abusive relationship. Following the relevant literature, Corvo and colleagues (2018) proposed attachment security priming as a possible and effective intervention technique for IPV. Altering IWMs that are negatively predisposed towards the self may enable actual or prospective victims to obtain the skills required to meet attachment needs in ways that are not at the cost of their well-being. Considering the extent to which attachment anxiety, fear of abandonment, and negative evaluations of the self can be attenuated by shifting attention to moments when attachment needs were fulfilled—that is, by evoking attachment security schemas—it may be possible to empower victims. Drawing on indirect evidence (e.g., more positive views of the self and less attachment anxiety, Carnelley & Rowe, 2007) and the suggested research, we investigated the effect of evoking secure schemas using priming method on tendency to accept staying with an abusive partner (see Aim 4/b). In this sense we believe activating attachment security schemas can be a powerful and effective technique to include in IPV interventions.

1.4. Aims of the present dissertation

1. The aim of the first research was to investigate the associations between attachment orientations and resilience through coping mechanisms (i.e., emotional focused coping and problem focused coping) during the ongoing COVID-19 pandemic.

2. The aim of the second research included here was to expand the existing SCC literature by providing a model for the examination of the relationship between (a) attachment orientations (i.e., attachment anxiety and attachment avoidance) and SCC; (b) SCC and aspects of empathy (i.e., empathic concern and personal distress); and (c) attachment orientations and aspects of empathy through SCC.

3. The aim of the third research was to examine the dynamics that underline some women's tendency to find BS appealing despite the costs. The goal was to expand the existing relationship dynamics literature by providing a model for the examination of the association between (a) attachment orientations (i.e., attachment anxiety and attachment avoidance), BS, and NTB; (b) NTB and preference for a partner endorsing BS attitudes through attachment anxiety levels; (c) attachment security schema activation and appeal of such partner through NTB.

4. The final research aimed to investigate the underlying factors that contribute to the continuation of a relationship in the presence of IPV. The goal was to build on suggested research route by proposing and providing a model for the association between (a) attachment orientations and WSR to keep an abusive relationship; (b) evoking attachment security schema and WSR with regards to persistence within the abusive relationship.

2. Attachment anxiety and resilience: The mediating role of coping (Study 1)

Abstract

In recent research, attachment has been addressed as a core factor that potentially contributes to resilience. However, there is still much to investigate regarding the mechanisms of this relationship. Emotion-focused coping and problem-focused coping strategies may be promising pathways via which attachment associates with resilience. The present study evaluated the role of attachment insecurity (i.e., attachment anxiety and avoidance) in resilience among a Turkish sample during the COVID-19 pandemic. We hypothesized that individuals with high levels of attachment anxiety would experience lower resilience via emotion-focused coping strategies. On the other hand, we did not have a specific hypothesis for attachment avoidance due to contrasting research findings of previous studies. Participants reported their attachment orientation, resilience, and coping strategies. Attachment anxiety was directly and, through both coping strategies, indirectly linked to resilience however attachment avoidance was only indirectly related to resilience through problem-focused coping. The findings indicate that low levels of attachment anxiety and the ability to use problem-focused coping strategies may be associated with greater resilience. The fostering of attachment security may thus reduce the use of emotion-focused strategies and may promote resilience among individuals with high levels of attachment anxiety. Moreover, our study is one of the first to investigate attachment orientations in relevance with coping and resilience during the ongoing pandemic This research has implications regarding the potentials of introducing psycho-educational trainings for better coping strategies in crisis like COVID-19 pandemic.

***Keywords**:* Attachment; Resilience; Emotion-focused coping; Problem-focused coping

2.1 Introduction

The intense mental demands experienced during the COVID-19 pandemic have shifted the focus towards coping and resilience with respect to well-being. Resilience is of the utmost importance, especially during periods of heightened threat, since it has been demonstrated to be closely related to both physical and psychological well-being (Karreman & Vingerhoets, 2012). Previous studies have shown that secure attachment can buffer distress by means of the implementation of functional coping strategies (Guo, 2019), and can also foster resilience (Bender & Ingram, 2018). By examining preferred coping strategies, the present study explored a possible link between attachment and resilience. In the context of the COVID-19 pandemic, when individuals have been reminded of their own mortality continuously, they might not be impacted in a similar vein and some people might require more support than others (Moccia et al., 2020). In this sense, it is important to identify the protective factors and specific processes that contribute to individuals' well-being and resilience in order to develop intervention strategies and promote enhanced global (i.e., psychological, social, and occupational) functioning.

2.1.1. Attachment

Attachment theory (Bowlby, 1969/82, Bowlby, 1988) provides an explanation for the dynamics and the importance of emotional bonding between the infant and its primary caregivers (i.e., attachment figures) based on the infant's very early experiences, and also explains the impact of these initial experiences on later relationships (Mikulincer et al., 2003). The premise of this theory is that attachment behavior is an innate, biological process and is evolutionarily adaptive (Bowlby, 1969/82). According to Bowlby, the attachment behavioral system is one of the evolutionarily adaptive behavioral systems that instinctively guide our behavior from birth with the aim of ensuring the survival of our species. The primary strategy in the attachment behavioral system is to gain proximity to an attachment figure, and the system is activated in the event of a situation or stimulus that is subjectively appraised as threatening in order to attenuate feelings of distress. Examples of the kind of threatening situations faced by infants that activate the attachment system include, but are not limited to, fatigue, hunger, illness, discomfort, or pain. By activating the attachment behavioral system (e.g., crying loudly when hungry), the infant attempts to gain proximity, thereby adaptively increasing its chances of survival. In adulthood, the attachment behavioral system is activated in response to significant transitions (e.g., loss, illness, separation,

starting university, or moving away from home) that are perceived as distressing, and its purpose is to attenuate stress as well as to elicit support and comfort from others in order to help the individual cope with and adjust to the experienced difficulties (Mikulincer & Shaver, 2007).

While the goal of the attachment behavioral system, as a primary strategy, is to seek comfort and security from an attachment figure when feeling threatened, the achievement of this goal is dependent on the actual response of the attachment figure (Bowlby, 1969). If the attachment figure balances the provision of comfort (i.e., a safe haven) with reassurance and support for exploration (i.e., a secure base) in times of need, the attachment behavioral system is deactivated, since the quest for proximity has apparently been effective. Continuous experience based on this pattern contributes to "attachment security," which involves individuals exhibiting low levels of attachment anxiety and avoidance. However, if the primary strategy is not efficient and the attachment behavioral system is not deactivated due to an inadequate, unresponsive, or inconsistent attachment figure, one of the secondary strategies—hyperactivation or deactivation—is subsequently activated. Secondary attachment strategies are affect regulation strategies when proximity seeking seems not working, or distressing itself (Mikulincer & Shaver, 2008). If one of these two strategies is activated regularly and predominantly, the individual develops patterns of attachment insecurity—that is, frequent use of the hyperactivation strategy contributes to "attachment anxiety," whereas frequent use of the deactivation strategy contributes to "attachment avoidance." The former strategy involves multiplying proximity-seeking attempts until attachment security is provided, whereas the latter is characterized by the inhibition of attachment needs without the achievement of attachment security (Cassidy, 1994; Mikulincer et al., 2009; Shaver et al., 2005). Both these strategies have adverse outcomes for the individual, which include using less effective coping strategies and being less able to form healthy relationships (Hazan & Shaver, 1987; Mikulincer & Shaver, 2018).

Another central premise of attachment theory concerns "internal working models" (Bowlby, 1969/82). Attachment is a dynamic process that is heavily based on evaluations of both the self and the attachment figure in times of need. The outcomes of the attachment relationship, as well as the attachment figure's responses, generate mental representations (i.e., internal working models: IWMs) that contribute to subsequent attachment behaviors. In other words, mental representations of the self and others are formed by repeated adequate or inadequate experiences

during the early caregiver–child relationship. These IWMs of the self and others impact the individual's behavioral, cognitive, and affective processes by providing guidance about what to expect from others and how to interpret interactions, and by storing memories of attachment-related events (Bowlby, 1969/82). Once internalized, experiences of threat or safety become working models and serve as templates for behavior, including coping, as well as becoming core aspects of our personality, including resilience (Kirkpatrick & Hazan, 1994).

Securely attached individuals have a history of a responsive, consistent, and adequate child–caregiver relationship that manifests itself in positive views of the self and others later in life. Such individuals are comfortable with close relationships and feel in control of their lives. They have also learned to express their emotions and have developed the sense of internal security essential for modulating appropriate responses to stress and to situations involving risk. Individuals high in attachment anxiety have a history of inconsistently and insufficiently responsive caregiver–child episodes, which have left them with a negative model of the self and a positive model of others. They are dependent, lack self-confidence, and conform to others' wishes, and while they want relationships, they excessively worry about abandonment. Individuals high in attachment avoidance have had consistently unresponsive caregivers, resulting in a negative model of others and a positive model of the self (Bowlby, 1969/82). Although the positive model of the self in individuals with high attachment avoidance tends to resemble that of secure individuals, it is the result of defensive self-enhancement/self-inflation, in contrast to secure individuals, whose positive self-model is based on their core sense of being loved, accepted, and valued by their attachment figures (Miller et al., 2013). Individuals high in attachment avoidance are uncomfortable with closeness and intimacy, and independence is of the utmost importance in their lives (Mikulincer & Shaver, 2018).

Maintaining the secondary attachment strategies (i.e., hyperactivation or deactivation) and IWMs, which are mostly negative either for self or for others, might make highly insecure individuals less adept at dealing with stressful situations. The recent research has been investigating the relationship between attachment orientations and the ability to cope with stressful situations (Craparo et al., 2018; Fasihi et al., 2013; Frías et al., 2014) building on the conclusion that established attachment schemas may carry forward into adulthood and shape how individuals cope with stressful situations (Seiffge-Krenke & Beyers, 2005).

2.1.2. Coping

Coping is a complex, multidimensional process that is defined as "constantly changing cognitive and behavioral efforts designed to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141). Compas et al. (2001) define coping as a dynamic process by means of which individuals adapt to stress and adversity. It includes emotion management, the regulation of thought processes and behavior, and action on the environment in order to alter or decrease stress. There are two main coping strategies: problem-focused coping and emotion-focused coping (Lazarus & Folkman, 1984). Problem-focused coping consists of attempts to solve a problem directly while seeking information about it in order to attenuate distress, whereas emotion-focused coping involves a shift of attention towards emotions, either to express or suppress them, without actively focusing on the problem itself. Problem-focused coping strategies (e.g., the gathering of information or planning) are utilized when the individual trusts their abilities to lessen the effects of the stressor(s), whereas emotion-focused coping strategies are implemented when the individual perceives themselves as incapable of dealing with the stressor or perceives the stressor to be something that cannot be altered and has to be endured.

Both the demands of the problem and individual differences, including differences in attachment orientations, influence a person's appraisal of stress and their available resources, and, as a result, have an impact on the coping process (Folkman & Moskowitz, 2004). The attachment system is activated when an individual is faced with a subjectively appraised threat, while the individual's attachment orientation directs their interpretation of the threat, as well as their reaction to it (Collins & Feeney, 2004; Mikulincer & Shaver, 2007). The literature suggests that insecurely attached individuals are more likely to perceive events as stressful and threatening and to react with less-effective coping mechanisms than their securely attached counterparts. Individuals with high attachment security tend use problem-focused coping strategies (e.g., Abraham & Kerns, 2013), whereas individuals with high in attachment anxiety or avoidance tend to be more reliant on emotion-focused coping strategies (Pascuzzo et al., 2013).

Attachment system and coping mechanisms might be regarded as similar in terms of providing cognitive interpretations of distressing stimuli and prompting decisions regarding how much trust to place in oneself and others (i.e., IWMs) in order to alter stress and maintain

homeostasis. Roth and Cohen (1986) suggested that perceived social support and self-compatibility alter the relationship between stress and its outcomes. Individuals differ in terms of asking for social support when faced with a threatening stimulus, and in terms of their appraisal of their own ability to alter stress due to their mental representations of the self and others. Securely attached individuals appraise their ability to cope with stressful situations more positively and constructively, whereas individuals high in attachment avoidance inhibit their reactions to stressors and do not take advantage of social support as a form of coping (Mikulincer & Florian, 1998). On the other hand, individuals high in attachment anxiety are hypervigilant; they overreact to stressors and tend to utilize maladaptive coping behaviors such as exaggerating the seriousness of the problems, their inability to cope as well as focusing on their emotions (Berry & Kingswell, 2012; Mikulincer et al., 2003). Attachment security is known to facilitate personal adjustment in the presence of adversities through constructive, flexible, and reality-attuned coping efforts (Mikulincer & Shaver, 2007). In other words, attachment security directs individuals towards using effective coping strategies and, at the same time, increases their resilience by predisposing them towards flexibility in response to adversities.

2.1.3. Resilience

Resilience is considered as a skill that helps maintain positive adaptation and normative functioning in individuals who are going through significant or severe adversities (Fletcher & Sarkar, 2013; Jenson & Fraser, 2015). Among the individual differences that have been found to be associated with resilience are beliefs, attachment orientations, coping strategies, and identity characteristics (Craparo et al., 2018; Guo, 2019; Pellerone et al., 2016). Indeed, attachment theory suggests that attachment security provides better developmental outcomes, including resilience (Karreman & Vingerhoets, 2012). Several longitudinal studies have identified a pathway from attachment orientations to resilience, in which attachment orientations affect resilience rather than the other way around (e.g., Galatzer-Levy & Bonanno, 2013).

One of the variables underlying the relationship between attachment and resilience may be coping. According to Leipold and Greve (2009) threats and challenges activate regulatory or coping processes that enable the individual to deal with the respective threat or challenge. Following this approach, Guo (2019) suggested conceptualizing resilience according to the stability or progressive changes resulted from the coping processes. In this respect, coping

strategies that are engaged in the face of stressors might impact resilience. Previous research has indicated that attachment security is associated with problem-focused coping (Villasana et al., 2016), and that this coping strategy predicts resilience (Guo, 2019).

On the other hand, Karreman and Vingerhoets (2012) showed emotion-focused coping strategies to be related to poor resilience, while in Pascuzzo et al.' (2013) study, attachment anxiety was found to be closely connected to the use of emotion-focused coping strategies. Following the five elements of resilience—personal competence, social competence, family coherence, social support and personal structure— introduced by Friborg et al. (2003), Marriner et al. (2014) suggested that "… many of these elements might be seen in people with a secure attachment style and also in those who use problem-focused strategies majorly to cope with stressors" (p.4).

Although previous research provides evidence for the link between attachment and resilience, less is known about the mechanism underlying this association. Building on the indirect evidence mentioned above, we believe that the association between different coping strategies and attachment orientations may provide an insight into why individuals high in a specific attachment orientation are more likely to demonstrate resilience than others. Our goal was to explore the role played by coping strategies in the relationship between attachment orientations and resilience, since resilience is also explained as "a stress-resistant attitude, related to the appraisal of oneself as able to cope with stressors" (Karreman & Vingerhoets, 2012, p. 821) and IWMs- that include cognitive appraisals of self- along with secondary strategies connected to attachment orientations, impact coping strategies for stressors. Indeed, the assessment of stressful situations and one's own competences to cope with them is affected by the level of an individual's self-assessment (e.g., IWMs) and habits of reacting to difficulties (e.g., secondary attachment strategies, coping strategies) are among personality determinants of resistance to stress (Huber, 2010 as cited in Pudlo-Komorowska, 2016). Further, it has been argued that resilience should be differentiated from coping since they are related but different constructs with respect to their impact on behavioral changes (Bonanno & Diminich, 2013). Coping refers to cognitive and behavioral strategies to handle and manage stressful events or negative psychological and physical outcomes (Folkman & Moskowitz, 2004) while resilience refers to the adaptive capacity to recover from stressful situations in the face of adversity (Steinhardt & Dolbier, 2008). What is more, there are studies that have observed that coping style predicts resilience (Chen et al., 2018; Chen et al.,

2019). In this sense, it may be that attachment influences resilience because it is associated with variance in engaged coping strategies, and coping strategies may in turn shape resilience when faced with distressing stimulus.

Because of the limited number of studies that have associated coping strategies with attachment orientations and resilience (e.g., Craparo et al., 2018; Guo, 2019), as well as evidence suggesting a relationship between the different attachment orientations and resilience (see Rasmussen et al., 2019), we proposed a new model, which is presented in *Fig. 1*. In particular, we hypothesized that attachment security would be correlated with greater resilience and reliance on the problem-focused coping strategy.

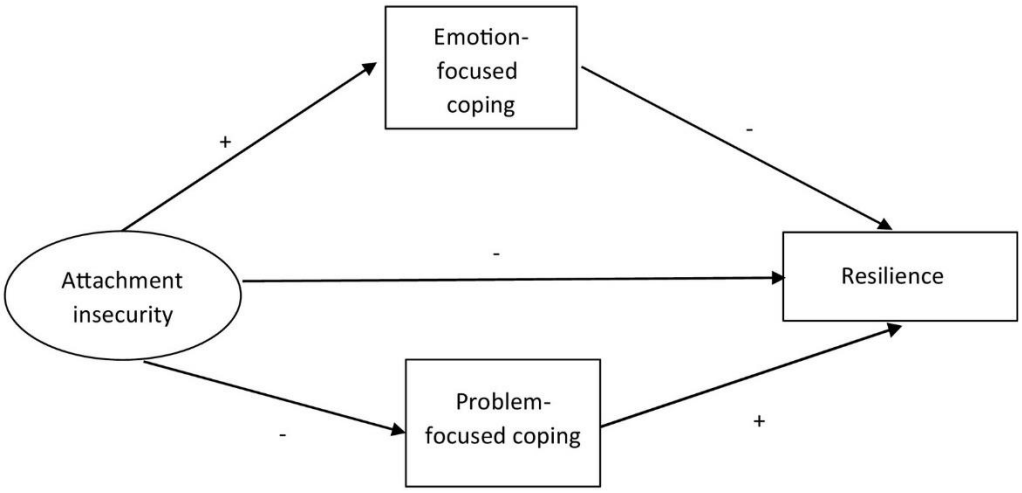

Fig. 1. Hypothesized model of the current study.

Note. +: The association was hypothesized to be positive; −: The association was hypothesized to be negative.

Our goal was to analyze these questions in the context of the COVID-19 pandemic, which is a significant stressor for many people. To the best of our knowledge, no study has investigated the attachment orientations, coping and resilience association during the ongoing COVID-19 pandemic so far. Unlike everyday stressors, which can be understood as mild adversities, the pandemic ranks among such significant adversities as life-threatening diseases, wars, or major disasters (Fletcher & Sarkar, 2013). According to Davydov et al. (2010), resilience and the factors underlying the preferred coping mechanism may differ in relation to the severity of the adversity. Indeed, the COVID-19 pandemic is a significant stressor for many individuals. Coping practices

that are detrimental to well-being, such as mental disengagement (e.g., the use of alcohol or sedative drugs and excessive eating), have been commonly employed, and these practices are associated with higher anxiety levels (Savitsky et al., 2020).

Furthermore, the individual's appraisal of the threat represented by the COVID-19 pandemic and their preferred coping strategy are known to affect their adherence to public health measures (Chong et al., 2021; Kachanoff et al., 2021). It is shown that situations that appraised as distressing trigger attachment system, and a function of attachment is to regulate distress (Bartholomew & Horowitz, 1991). Also, differences in stress responses are related to attachment orientations (see Kidd et al., 2013). In this sense, we believe that the COVID-19 pandemic provides precise conditions to study coping and resilience through attachment orientations.

Overall, we expected that attachment insecurity, especially attachment anxiety, would predict poorer resilience during the pandemic since Moccia et al. (2020) reported that individuals with higher attachment anxiety levels (vs. lower) stated poorer mental health outcomes during the COVID-19 pandemic. On the other hand, although attachment avoidance listed either as a risk factor (Liu et al., 2009; Marganska et al., 2013) or as a protective factor (Moccia et al., 2020) for poorer mental health outcomes, these findings are less robust compared to attachment anxiety with some studies finding no significant association between attachment avoidance and poor mental health (Eberhart & Hammen, 2009; Stanton & Campbell, 2014; Surcinelli et al., 2010). In this sense, we were not able to provide a specific hypothesis regarding attachment avoidance.

2.2 Method

2.2.1. Participants and procedure

In order to perform a regression analysis with five predictor variables, with alpha levels set at 0.05, and to achieve a confidence level of 95%, it was determined that a minimum of 107 participants were needed for this study (Gravetter & Wallnau, 2007). Data were collected from 179 Turkish individuals. After obtaining the necessary permission from the relevant university's research ethics committee, all the questionnaires were uploaded to Qualtrics. The questionnaires were in Turkish. The survey was advertised on relevant Facebook pages as a study on “reactions to distressing events.” Participation was both voluntary and anonymous. We obtained the informed consent of all participants, who were selected based on three inclusion criteria: living in Turkey during the

COVID-19 pandemic, speaking Turkish, and being older than 18. Twenty-three questionnaires were excluded from further analysis, they were either incomplete or completed in an unreliable fashion (giving the same answer to all items), leaving a final sample size of 156. Over two-thirds of the participants were female (n = 120, 75.91%). The average age was 35.24 years (*SD* = 11.53).

2.2.2 Measures

2.2.2.1. Adult attachment orientations

Adult attachment was assessed using the Experiences in Close Relationships–Revised questionnaire (ECR-R; Fraley et al., 2000, adapted into Turkish by Selçuk et al., 2005). The ECR-R is a 36-item self-report measure of adult attachment. The scale consists of two 18-item subscales that represent the two orthogonal dimensions of the attachment construct: attachment related anxiety (α = 0.94) and attachment-related avoidance (α = 0.92). Participants were instructed to indicate how they generally experience relationships using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), with higher scores reflecting greater endorsement of the construct. An example of an item representing anxiety was "I worry a lot about my relationships," while an example of an item representing avoidance was "I don't feel comfortable opening up to others."

2.2.2.2. Coping

Coping strategies were measured using the Coping Style Questionnaire (Lewin & Sager, 2009, adapted into Turkish by Aslan, 2018). The scale consists of two subscales: problem-focused coping (e.g., "I try to figure out different ways of solving the problem," α = 0.89); and emotion-focused coping (e.g., "I refuse to believe it has happened," α=. 86). Respondents used a 5-point Likert scale, and on both scales high scores indicated reliance on the respective coping style.

2.2.2.3. Resilience

Resilience was measured using the Brief Resilience Scale (BRS; Smith et al., 2008). The BRS consists of six items that are scored using a 5-point Likert scale (from 1 = strongly disagree to 5 = strongly agree) to assess the individual's ability to bounce back from stress (e.g., "I tend to bounce back quickly after hard times", α = 0.87). A back-translation procedure was used to translate the six items into Turkish. The researcher translated the items into Turkish, and a notarized translator

then backtranslated them into English. The Turkish translations were modified until each item could be properly backtranslated into English. The BRS was scored by reverse-coding items 2, 4, and 6, and calculating the mean of all six items.

2.3. Results

All the descriptive analyses and bivariate correlations are shown in Table 1. Principal component analysis (PCA) was conducted for the responses to the six items of the BRS. A single factor (eigenvalue = 3.59) that explained 59.91% of the total variance was extracted. The inspection of the scree plot also suggested a one-factor solution (initial eigenvalues = 3.59, 0.69, 0.62, 0.43, 0.34, and 0.30). The Kaiser–Meyer–Olkin (KMO) measure (0.85) and Bartlett's test, $\chi^2(15) = 400.24$, $p < .0001$, clearly showed that the correlations among the BRS items were strong enough for factor analysis. We tested all parallel mediation models using the PROCESS macro (model 4) in SPSS (Hayes, 2013), with 5000 bootstrapped samples. Emotion-focused coping strategies, anxiety, and problem-focused coping strategies were tested as mediators between attachment orientations and resilience. Indirect effects (IEs) were subsequently presented.

Table 1

Means, Standard Deviations, Cronbach's Alpha, and Bivariate Correlations

	Variable	*M*	*SD*	*A*	1	2	3	4	5
1.	Attachment anxiety	3.196	1.402	.94	-	.34**	.43**	-.26**	-.34**
2.	Attachment avoidance	3.099	1.260	.92		-	.06	-.23**	-.06
3.	EFC	2.584	1.008	.86			-	-.14	-.46**
4.	PFC	3.719	0.836	.89				-	.34**
5.	Resilience	3.309	0.863	.87					-

Note. $N = 158$. * $p < .05$, ** $p < .001$. EFC=Emotion-focused coping, PFC=Problem-focused coping.

2.3.1. Attachment anxiety

Age and gender were not found to be statistically associated with the level of resilience either in the total effects model ($b = 0.0076$, $p = .185$; and $b = -0.0288$, $p = .849$ respectively; predictors of resilience: attachment anxiety, gender, age) or in the direct effects model ($b = 0.0018$, $p = .728$; $b = 0.0472$, $p = .729$ respectively; predictors of resilience: attachment anxiety, problem-focused coping, emotion-focused coping, gender, age). The results, based on 5000 bootstrapped samples,

indicated that, while the total effect of attachment anxiety on resilience was significant (*βtotal* = −0.3272, *SE* = 0.0471, 95% CI [−0.2956, −0.1094]), the direct effect was not (*βdirect* = −0.0939, *SE* = 0.0481, 95% CI [−0.1531, 0.0369]). Overall, the two mediators fully mediated the relationship between attachment anxiety and resilience (*IEoverall* = −0.2333, 95% CI [−0.3406, −0.1336]). Both mediators were found to significantly contribute to the overall IE. Specifically, there was a statistically significant IE of attachment anxiety on resilience through emotion-focused coping (*IEemotion* = −0.1726, 95% CI [−0.3406, −0.1336]). Problem-focused coping also mediated the relationship between attachment anxiety and resilience (*IEproblem* = −0.0607, 95% CI [−0.1234, −0.0102]). The overall model explained 55% of resilience, R^2 = 0.5523, $F(5,150)$ = 13.16, $p < .001$. For the regression coefficients, *see* Fig. 2.

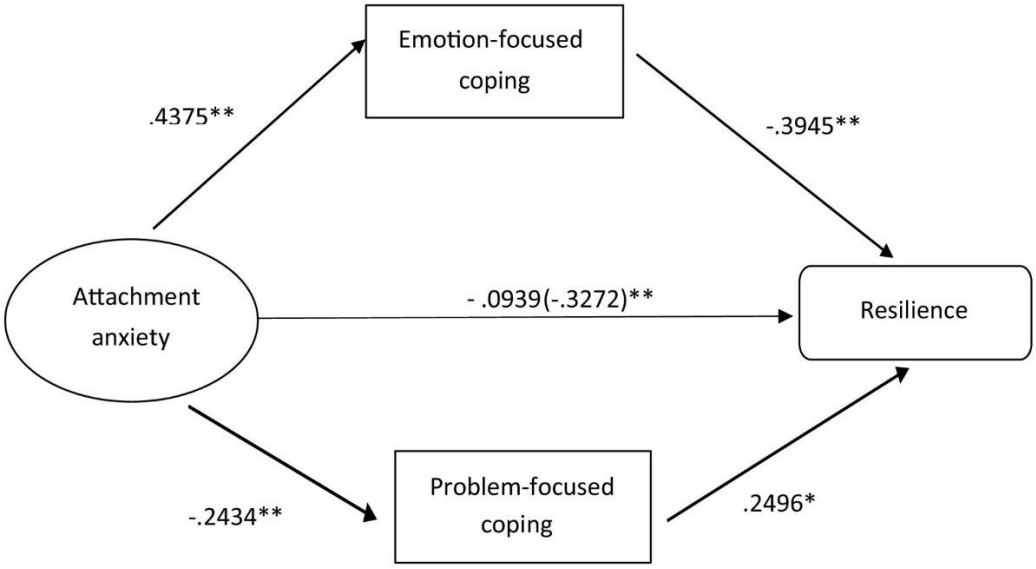

Fig. 2. Parallel mediation model 1.

Note. N = 156. The figure shows the indirect effect of attachment anxiety on resilience through emotion-focused coping and problem-focused coping. Standardized effects are presented. The effects on the direct path from attachment anxiety to resilience show the direct effect and the total effect. *$p < .05$, **$p < .001$.

2.3.2. Attachment avoidance

We run a similar mediational model for possible attachment avoidance and resilience association. Age and gender were not found to be statistically associated with the level of resilience either in the total effects model (b = 0.0089, p = .141; and b = −0.0325, p = .839 respectively; predictors

of resilience: attachment avoidance, gender, age) or in the direct effects model (b = 0.0015, p = .781; b = 0.0572, p = .677 respectively; predictors of resilience: attachment avoidance problem-focused coping, emotion-focused coping, gender, age). Neither the total effect ($\beta total$ = −0.0794, SE = 0.0554, 95% CI [−0.1642, 0.0548]) nor the direct effect ($\beta direct$ = 0.0146, SE = 0.0487, 95% CI [−0.0861, 0.1063]) of attachment avoidance on resilience was significant. On the other hand, the overall indirect effect was significant (IEoverall = −0.0940, 95% CI [−0.196, -0.0019]). Specifically, although there was not a statistically significant IE of attachment avoidance on resilience through emotion-focused coping (IEemotion = −0.0290, 95% CI [−0.1099, 0.0426]), problem-focused coping significantly mediated the relationship between attachment avoidance and resilience (IEproblem = −0.0650, 95% CI [−0.1384, −0.0137]). Which means that attachment avoidance is related to resilience only through problem-coping strategies. For detailed regression coefficients see Fig. 3.

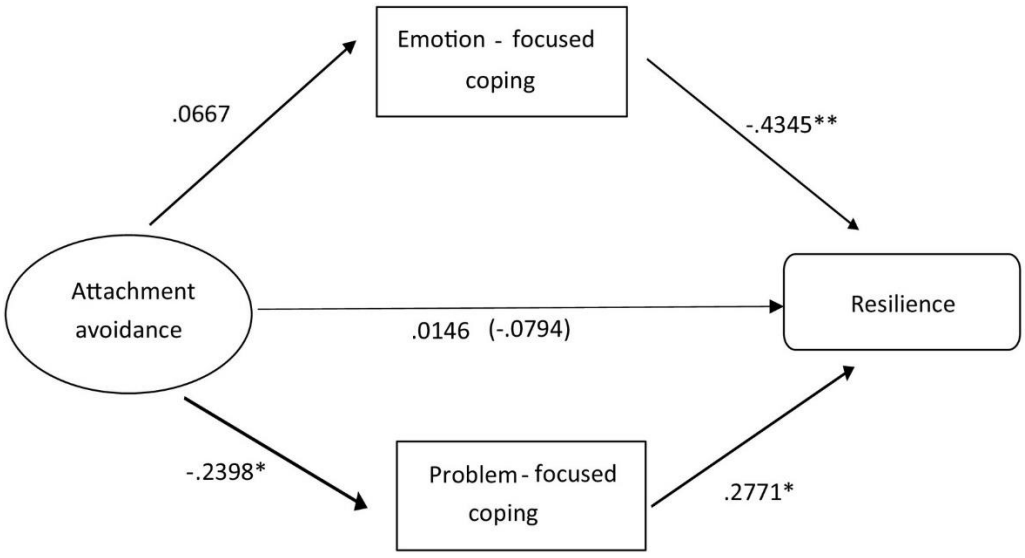

Fig. 3. Parallel mediation model 2.

Note. N = 156. The figure shows the indirect effect of attachment avoidance on resilience through emotion-focused coping and problem-focused coping. Standardized effects are presented. The effects on the direct path from attachment avoidance to resilience show the direct effect and the total effect. *p < .05, **p < .001.

2.4. Discussion

The main purpose of the present study was to obtain a better understanding of the factors that contribute to the connection between resilience and attachment. We tested two mediation models corresponding to the attachment dimensions assessed by the ECR-R (i.e., anxiety and avoidance). Overall, the pattern of the relationship between resilience and attachment orientations (i.e., avoidance and anxiety) seems to be similar, but not significant for attachment avoidance, suggesting that the attachment anxiety has a greater predictive power on resilience when its direct and indirect statistical effects are taken into consideration compared to attachment avoidance. More specifically, individuals with high levels of attachment anxiety might be less resilient to stress compared to others.

Besides the direct effect of attachment anxiety on resilience, emotion-focused coping and problem-focused coping fully mediated the relationship between attachment anxiety and resilience. While considering the attachment anxiety and resilience association, it can be assumed that individuals that are high in attachment anxiety tend to use emotion-based coping strategies more, compared to the problem-focused ones and as a result, they indicate less resilience. However, it is noteworthy that, although attachment avoidance did not have a direct significant effect on resilience, it had an indirect significant effect on resilience through problem-focused coping.

In the present study, we demonstrated that attachment orientations are related to resilience through different coping styles. It is assumed that the proposed model provides a useful and holistic view to understand how attachment relates to resilience. The study was carried out in the context of a strong stressor, the COVID-19 pandemic, which is associated with numerous causes of distress, including increased exposure to reminders of mortality and heightened risk of death (Pyszczynski et al., 2021). The finding that attachment anxiety was directly and indirectly related to resilience suggests that attachment is a key feature for stress responsivity and that, attachment anxiety may lessen resilience via the use of an emotion-focused coping strategy: Individuals who are high in attachment anxiety may be less resilient due to the shifting of focus to the self rather than to the problem.

Our findings are in line with the core assumptions of attachment theory with respect to insecure attachment patterns. According to attachment theory, interactions with inconsistent,

unreliable, or insensitive attachment figures interfere with the development of a secure and stable mental foundation; reduce resilience to stressful life events; and predispose individuals to psychological breakdown in times of crisis (Bowlby, 1988). Individuals high in attachment anxiety develop a negative internal model of the self, leaving them with the tendency towards negative portrayals of the self and of one's abilities, due to their interpersonal histories that are dominated by feelings of failure and helplessness (Bartholomew & Horowitz, 1991). Since self-efficacy is an underlying factor that fosters resilience (Collishaw et al., 2016), the sense of lack of control over keeping proximity to attachment figures despite the substantial efforts, might form the basis to low self-efficacy beliefs and interfere with resilience among individuals high in attachment anxiety. Our study demonstrated the impairing effect of attachment anxiety on resilience, and our data are supported by the existing literature (e.g., Rasmussen et al., 2019).

The results of the present study are also in agreement with the assumption that individual's attachment orientation might predispose them to adopt a specific coping strategy. Emotion-focused coping strategies have been positively correlated with attachment anxiety. Attachment anxiety is characterized by employing hyperactivation strategies in order to attract the attention of the attachment figure and be soothed when faced with threats. Hyperactivation strategies include the exaggeration of threats, overdependence on the attachment figure, and hypervigilance to threat when faced with distressing situations (Mikulincer & Florian, 1998; Mikulincer & Shaver, 2007). Although the use of hyperactivation and emotion-focused strategies (e.g., self-blame, self-criticism, rumination, focus on negative emotions, and feelings of helplessness) by individuals high in attachment anxiety is to some extent effective in maintaining the attention of the attachment figure, these strategies may serve to intensify anxiety, which has been found to interfere with the development of resilience traits (Cantazaro & Wei, 2010; Pascuzzo et al., 2015).

By contrast, in the present study attachment avoidance was not related to resilience directly but through problem-focused coping. The null direct association between attachment avoidance is in line with Jenkins's statement (2016), that "…the conflicting coping responses make it difficult to ascertain whether attachment avoidance can genuinely promote resilience…" (p.68). Although, in the present study, attachment avoidance seems to foster resilience, the link is established only through problem-focused coping. It seems that individuals high in attachment avoidance become more resilient because they use less problem-focused coping strategies. This is in line with the

findings that present the positive connection between tendency to use 'avoidance-focused' coping strategies (i.e., diverting attention from anxiety provoking stimulus) and attachment avoidance (Marriner et al., 2014). What is more, this finding is also in line with the argument that attachment avoidance seems to work similar to attachment security in adversity; both seem to be related with less distress compared to attachment anxiety (Mikulincer & Shaver, 2007).

The positive (indirect) link between attachment avoidance and resilience is not surprising since compulsive self-reliance of individuals that are high in attachment avoidance reinforce their belief that they are competent to manage stressful situations (Mikulincer & Shaver, 2007). In this sense, although both attachment avoidance and attachment security seem to promote resiliency (e.g., Karreman & Vingerhoets, 2012), the manner they are connected to resilience might be different. While problem focused coping is positively related with resilience (de la Fuente et al., 2017) as well as with attachment security (Bender & Ingram, 2018), individuals high in attachment avoidance seem not to benefit from it. Similar to attachment anxiety, attachment avoidance is connected with apprising stressful events as threatening instead of challenging unlike attachment security (Mikulincer & Shaver, 2008). As attachment avoidance has been associated with a minimal distress or distress response to stressors, and individuals high in attachment avoidance preferably distance themselves from the stressor to cope with it (Mikulincer & Shaver, 2007), problem focused coping strategy that involves facing with the stressor might contradict with the defense mechanism based on stress-denial and increase perceived threat as well as unpleasant emotions. Indeed, when distressed, individuals high in attachment avoidance tend to divert their attention away from perceived threats, which also serves for emotional dissociation— a learned defense mechanism to manage stress within the self— in order to conceal the feelings of insecurity (Mikulincer & Shaver, 2007). High level of resilience that goes along with attachment avoidance might be more defensive than that of attachment security since it requires an effort to divert attention from actual problem instead of actively focusing on the problem.

Aside from the indirect influence of attachment, problem-focused coping was positively associated with resilience, whereas emotion-focused coping was negatively associated with resilience. In other words, the type of coping strategy adopted is a crucial factor for resilience and, in turn, for well-being in the face of adversity. The findings of the present study regarding the significant associations between coping strategies and resilience are also consistent with the

findings of earlier studies (e.g., Villasana et al., 2016), which indicated that problem-focused coping significantly fostered resilience, whereas emotion-focused coping strategies had a detrimental effect on resilience. Indeed, coping based on emotions and distraction correlated negatively with resilience, while task-oriented coping correlated positively with it (Secades et al., 2016).

The present study is built on previous research by collating the indirect evidence obtained from coping, resilience, and attachment studies, as well as providing information on the connection between attachment and resilience. However, the study was not without limitations. In terms of design, we used a non-WEIRD (Western, educated, industrialized, rich, democratic) sample—that is, Turkish individuals— and although these data may provide an insight into resilience and attachment orientations among this population, they cannot be generalized to other populations, since the COVID-19 pandemic has both universal and country-specific effects due to differences in the handling of the pandemic, including, but not limited to, the extent of the economic support provided to citizens and the different quarantine policies. Although, based on the indirect and direct evidence, we conceptualized the relationship between attachment orientations and resilience as one in which attachment orientation influences resilience by means of the coping strategies employed, the study was cross-sectional, thus no causal inferences can be drawn.

What is more, two-third of our sample consisted of female participants. Even though we could not find an effect of gender while running the analyses, we believe findings might differ due to gender since gender is an important biological determinant of vulnerability to psychosocial stress (Wang et al., 2007). Indeed, in a recent survey conducted in China during COVID-19 outbreak women reported higher post-traumatic stress symptoms (Liu et al., 2020). On the other hand, we did not study the degree participants were affected by COVID-19 pandemic. We believe measuring various COVID-19 related stress factors (e.g., job-loss, loss of loved ones, going through the illness) in the future could provide deeper understanding to present study's findings.

Despite the limitations mentioned above, and although we are unable to provide any information about the causal nature of the relationship, the present study builds on the existing literature and offers an insight into the interplay between attachment orientations and resilience. We believe that the present study provides a basis for future longitudinal or experimental methodologies. To build on our findings, researchers may wish to build a more specific study and

focus on the role of different dysfunctional coping strategies (i.e., emotion-focused, and avoidance-oriented) for attachment and resilience association. Indeed, avoidance-oriented coping is another coping strategy that is negatively related to resilience, and it is highly related to attachment avoidance (Marriner et al., 2014). Researchers may also wish to examine the role of different dysfunctional coping strategies on attachment orientations using manipulation methods, including priming, to investigate causality (Rowe et al., 2020). Furthermore, the investigation might be expanded to the role of related mechanisms—including, but not limited to, self-esteem, worldviews, or emotion regulation strategies—since a strong negative correlation was demonstrated between attachment anxiety and resilience. In addition, the results of the present study might have clinical implications with respect to attachment security.

Given the association identified in the present study between attachment anxiety and inadequate coping, in order to strengthen resilience, it would be important primarily to explore ways to improve the effectiveness of coping. Specifically, the inducement of attachment security based on security priming exercises might guide individuals towards problem-focused coping strategies that can enhance their resilience. In this sense, the concept of "earned security"—that is, the acquiring of attachment security later in life based on secure contexts (i.e., through a relationship with a secure partner, or felt security following an attachment security priming task; Mota & Matos, 2015; Shibue & Kasai, 2014) might provide a deeper understanding between attachment and resilience. In different contexts, "earned secures" have been shown to perform nearly as well as "continuous secures" (Mota & Matos, 2015; Phelps et al., 1998), suggesting that attachment security inducement is a possible method for improving coping strategies and fostering resilience. Indeed, security priming has been shown to increase attachment security (Lin et al., 2013), which is associated with balanced resilience (Oehler & Psouni, 2018).

Overall, the results of the present study demonstrate the important role of attachment in the facilitation of resilience. Our findings indicate that attachment orientations are likely to be important in building resilience, which may reduce the risk of adverse outcomes. However, this association is mediated by coping strategies, which are also affected by attachment orientations. In a broader sense, our findings suggest that attachment anxiety is a risk factor that negatively impacts well-being by predisposing individuals to show both poor resilience traits and ineffective coping strategies in the face of distress.

3. The association between attachment orientations and empathy: The mediation effect of self-concept clarity (Study 2)

Abstract

Although earlier research had demonstrated significant links between attachment and self-concept clarity; attachment and empathy; and self-concept clarity and empathy respectively, there had been no studies examining these associations in conjunction with one another. Therefore, the present studies explored whether individual differences in self-concept clarity would mediate the relationship between attachment orientation (i.e., attachment anxiety and attachment avoidance) and empathy (i.e., empathic concern and personal distress). In Study 1, the association between attachment orientation and self-concept clarity was examined among 602 Hungarian university students. In Study 2, the relationship between attachment and empathy was investigated through self-concept clarity among 1000 Hungarian adults. The findings from both samples revealed that attachment avoidance and anxiety were negatively related to self-concept clarity. In Study 2, individuals with greater self-concept clarity showed greater empathic concern and lower personal distress. Attachment avoidance was associated with lower empathic concern, whereas there was no significant association with personal distress. Attachment anxiety was positively related to empathic concern and personal distress. Self-concept clarity partially mediated associations with attachment anxiety and aspects of empathy. These findings suggest the importance of attachment orientations in terms of their influence on the self with regard to interpersonal relations.

Keywords: Attachment anxiety; Attachment avoidance; Self-concept clarity; Empathy

3.1. Introduction

Attachment and empathy are two fundamental aspects of human nature that influence interpersonal relationships. Attachment theory provides an ideal framework for investigating psychological processes such as empathy and the development of the self (Bowlby, 1969, 1982). When considering the latter, self-concept clarity (SCC) can be regarded as an important aspect (Yang & Brown, 2016). Campbell et al. (1996) defined SCC as "…a structural aspect of the self-concept: the extent to which self-beliefs are clearly and confidently defined, internally consistent, and stable" (p.141). Previous research on attachment has emphasized how attachment anxiety and attachment avoidance interfere with the development of self-concept (Mikulincer, 1995). Similarly, self-concept has been listed among the crucial factors for empathy, since empathy requires a clear self–other distinction (e.g., de Guzman et al., 2016). The presence of a sensitive, responsive, and reliable primary caregiver, which leads to attachment security in an individual, is key to the development of the self–other distinction. In this sense, we suggest a possible interconnection between attachment orientations, SCC, and empathy.

Numerous earlier studies have examined empathy through attachment (e.g., Khodabakhsh, 2012; Stern & Cassidy, 2018) and SCC (e.g., Kállai et al., 2019; Krol & Bartz, 2021). However, to the best of our knowledge there have been no studies examining the possibility that the relationship between attachment and empathy might be influenced by a clear sense of self. The aim of the present research was therefore to expand the existing SCC literature by providing a model for the examination of the relationship between (a) attachment orientations (i.e., attachment anxiety and attachment avoidance) and SCC; (b) SCC and aspects of empathy (i.e., empathic concern and personal distress); and (c) attachment orientations and aspects of empathy through SCC.

3.1.1. Attachment and empathy

Attachment systems shape individuals' close relationships and, based on their experiences with attachment figures such as parents, people develop mental representations—internal working models (IWMs)—of themselves and others in line with their attachment orientation (Bowlby, 1969, 1982; Hazan & Shaver, 1987; Mikulincer & Shaver, 2012). These IWMs are thought to organize the perception and processing of social information, determine emotional and physical responses to threats, and guide social behavior throughout the individual's lifespan (Mikulincer &

Shaver, 2007). Early attachment experiences are believed to influence later social functioning through these representations (Mikulincer & Shaver, 2016).

Bartholomew and Horowitz (1991) proposed two primary dimensions stemming from the attachment system: attachment anxiety and attachment avoidance. An individual's attachment orientation refers to their location with respect to the dimensions of attachment anxiety and avoidance (e.g., Brennan et al., 1998; Mikulincer & Shaver, 2016). The former is characterized by negative IWMs of the self, whereas the latter is prompted by negative IWMs of others (Mikulincer & Shaver, 2012). Based on the cumulative history of early attachment experiences, inconsistent care increases the possibility of developing attachment anxiety, while consistent neglect predisposes individuals to attachment avoidance. Attachment anxiety includes fear of abandonment, which is manifested as a strong desire for extreme closeness with others. Attachment avoidance, on the other hand, refers to discomfort with closeness, which is manifested as a strong desire for independence (Mikulincer & Shaver, 2012). Since attachment orientation–based schemas are thought to persist throughout adulthood (Cassidy & Shaver, 2016; Mikulincer & Shaver, 2016), individual differences in terms of empathy may stem from attachment orientations (see also Stern & Cassidy, 2018).

Empathy is the ability to consider other people's perspectives, understand others' feelings, and offer responses that are appropriate to one's own emotional state as well as that of others (Baron-Cohen & Wheelwright, 2004). Empathy consists of cognitive components (e.g., the adoption of perspective) and affective components (e.g., empathic concern and personal distress) (Davis, 1983). Empathic concern involves feeling as well as responding with compassion toward a person in distress (Mehrabian & Epstein, 1972), whereas personal distress involves discomfort and anxiety, which is a self-focused response to witnessing the negative experiences of others (Batson, 1997).

It has recently been suggested that mature, other-oriented empathy (e.g., empathic concern) should be distinguished from dysregulated, self-focused negative emotion (e.g., personal distress) in response to others' distress (e.g., Eisenberg et al., 2015). In this sense, empathy is a fundamental aspect of social cognition, and attachment-related experiences structure social cognitive processes (Hünefeldt et al., 2013). Stern and Cassidy et al. (2018) suggested that empathy is nurtured through the quality of early interactions with an attachment figure, while attachment theory emphasizes the

effect of these interactions in terms of an individual's development, trustworthiness, and responsiveness to other people in the social world later in life (Bowlby, 1973, Bowlby, 1988).

Attachment may indeed be an important mechanism for empathy, since, as Bowlby (1973) stated, the attachment system is activated following a perceived or real threat (e.g., the perception of another's distress), when attachment-related needs for security and care, along with the behaviors required to satisfy those needs, become prominent. Such activation may, in turn, interfere with mature empathic responses, such as the provision of help to someone in need, since the individual may feel that obtaining security and care for the self (through personal distress) is a more urgent requirement than providing care for another (through empathic concern) (Cassidy et al., 2018). In this context, recent studies have investigated the role of attachment in explaining empathy throughout adulthood (Troyer & Greitemeyer, 2018).

Boag and Carnelley (2016) suggested that theory of mind—the ability to differentiate between self and others and to understand that others have different beliefs, desires, and intentions from one's own (Baron-Cohen, 1991)—may connect attachment and empathy. A good-quality relationship that fosters reflective functioning between the child and the primary caregiver (a requirement for the development of attachment security) is a key aspect of theory of mind and, as a result, of empathic development in oneself (e.g., Bloxsom et al., 2021; Boag & Carnelley, 2016). Since IWMs play a crucial role in terms of processing one's own and others' mental states through emotionally significant information, it is thought that attachment orientations do indeed play a role in theory of mind. Accordingly, Dykas et al. (2011) stated that the frequency, complexity, and accuracy of mentalization (stemming from theory of mind) vary, depending on the quality of attachment-related experiences. Indeed, Mikulincer et al. (2005) asserted that individuals tend to have a limited ability to acknowledge the feelings of others if they lack stable, sensitive, and reliable care from their primary caregiver (as in the case of attachment anxiety or avoidance).

Evidence from adult attachment research suggests that attachment security–related IWMs—a positive view of the self and others—and the ability to differentiate between the self and others increase concern for others' distress (Mikulincer & Shaver, 2015; Shaver et al., 2017). A sense of security (stemming from attachment security) has been recognized as allowing an individual to be confident in their ability to deal constructively with their own or another's distress, and as predisposing them to experience such feelings as a challenge rather than a threat. In turn,

such individuals tend to have an increased capacity to be open, sensitive, and responsive to others' pain (Cassidy et al., 2018). Indeed, individuals with high attachment security have been found not only to experience greater empathic concern (Mikulincer et al., 2005)—which requires greater self–other distinction compared to personal distress (Krol & Bartz, 2021)—but also to have a greater tendency to provide actual help when another person is in discomfort (Shaver et al., 2017). Furthermore, the short-term enhancement of attachment security (security priming) has been shown to increase empathy and a willingness to help others (Mikulincer et al., 2013).

In contrast to attachment security, attachment insecurity is characterized by a predisposition to vulnerable, defensive self-esteem (e.g., attachment avoidance), if not an outright negative model of the self (e.g., attachment anxiety). The IWMs of the self and others that underlie attachment insecurity may be conducive to self-concern, self-protection, the defensive rejection of others' needs, and misguided efforts to understand and help others (Mikulincer & Shaver, 2016; Shaver et al., 2017). For example, in earlier research, attachment avoidance has been linked to low empathic concern (Joireman et al., 2001), while attachment anxiety has been associated with high personal distress (Britton & Fuendeling, 2005; Joireman et al., 2001) and low empathic concern (Britton & Fuendeling, 2005). Furthermore, having experienced inconsistency, insensitivity, or a lack of care from an attachment figure who was unable to model and enhance empathic responses or promote the ability to differentiate between the self and others, individuals with low levels of attachment security may have been deprived of opportunities to witness, internalize, and imitate empathic behavior (see also social learning theory; Bandura & Walters, 1977).

Crucially, however, it has been observed that modelling is not necessarily sufficient for mature empathic processes. Instead, an individual needs to be the recipient of such care themselves (Mikulincer & Shaver, 2015; Shaver et al., 2017). Furthermore, an attachment figure who is ineffective in terms of mirroring the child's experiences and affects, through inconsistent or insensitive care or the absence of care, interferes with the development of mentalization due to the reduced stimulation of reflective capacity (Dewitte et al., 2019). Effective mirroring and the consequent mentalization capacities allow an individual to distinguish between the self and others and to acknowledge the specific characteristics, as well as the emotional states, of these separate entities (Fonagy & Target, 2002). In this sense, attachment anxiety or attachment avoidance may interfere with empathy due to ineffective care or lack of care from attachment figures and the

consequent negative IWMs of either the self or others, inefficient self–other distinction, and impaired socialization and social interactions.

3.1.2. Self-concept clarity and attachment

Both attachment anxiety and attachment avoidance have been linked to a range of intrapersonal outcomes, including self-esteem, self-alienation (Lopez et al., 2015), self-actualization (Otway & Carnelley, 2013), and self-verification (Emery et al., 2018). SCC is a clear understanding and coherent sense of self. Self-esteem has repeatedly been reported as being positively associated with SCC in the relevant literature (e.g., Suszek et al., 2018).

Other individuals are crucial for the development and understanding of the self (see Emery et al., 2018). To achieve a clear sense of self, which is heavily dependent on the self–other differentiation, relationships with primary caregivers during the early years of life are of the utmost importance. Attachment security is developed through sensitive, reliable, and responsive relationship experiences with primary caregivers, and in this sense greater attachment security may be connected with better self–other distinction. Individuals with high attachment security may have developed a stronger self-concept through stable and predictable feedback from their caregivers and may consider themselves to be lovable, resulting in greater self-esteem (Mikulincer & Shaver, 2012). Furthermore, attachment security results in people having positive representations of others, which in turn promotes closeness with others (Hazan & Shaver, 1987).

Since feedback from close others helps individuals to affirm their sense of self, the ability to form close relationships may foster a stable sense of self and SCC. Indeed, self-verification through feedback from close others has been linked to greater SCC (Emery et al., 2018). In this context, Kawamoto (2020) investigated the moderating role of attachment security on the relationship between self-esteem and SCC based on the broaden-and-build cycle of attachment security (Mikulincer & Shaver, 2016). The findings from his study demonstrated a positive association between self-esteem and SCC, which is stronger in individuals with secure attachment.

In contrast to the fostering effect of attachment security on SCC, attachment avoidance and attachment anxiety may be detrimental to SCC. Individuals with high attachment anxiety or avoidance may struggle to form a clear, coherent, and stable sense of self. Since attachment anxiety and avoidance both result from and contribute to impaired interpersonal relationships, benefiting

from close relationships to maintain a clear sense of self may prove challenging. Unlike their secure counterparts, individuals with high attachment anxiety or avoidance may not receive effective, reliable, and stable feedback from their caregivers. Later in life, these individuals may either hyperactivate or deactivate their relationship needs. Attachment avoidance is characterized by the deactivation of attachment needs and is manifested in excessive self-reliance and fear of forming close relationships (Mikulincer & Shaver, 2012). Given that individuals with high attachment avoidance are reluctant to become interdependent with close others, they may miss out on benefitting from others as a basis for a clear self-concept. Moreover, attachment avoidance has been characterized by reduced trust in others, including the feedback received from them (Mikulincer & Shaver, 2007). On the contrary, individuals high in attachment avoidance have relatively more complex self-structures than their counterparts with high attachment anxiety, who tend to organize self-relevant information into a small number of overlapping categories (Mikulincer, 1995). People with very high levels of self-complexity have been reported to experience lower SCC (Pilarska, 2016). In this sense, although individuals with high attachment avoidance have high self-esteem and positive feelings about the content of their self-concepts (Bartholomew & Horowitz, 1991; Mikulincer, 1995)—which fosters SCC (Kawamoto, 2020)—they may still experience lower SCC since their self-structure is relatively complex and they demonstrate less interest in forming relationships, are reluctant to self-disclose, and do not trust others. Indeed, the findings of a recent study demonstrated a negative association between SCC and attachment avoidance (Emery et al., 2018).

High levels of attachment anxiety, on the other hand, have been linked to a negative self-image, a less complex self-structure, and low self-esteem (Bartholomew & Horowitz, 1991; Brennan & Morris, 1997). Low levels of self-esteem may predispose individuals with high attachment anxiety to have a poor sense of self. Negative IWMs of the self-lead individuals who are high in attachment anxiety to seek external self-validation and to see close relationships as the main source of their self-esteem (Mikulincer et al., 2005) rather than basing their self-esteem on internal standards of competence and value (Mikulincer & Shaver, 2007). While these individuals have a greater desire than their counterparts with lower attachment anxiety to integrate or merge with close others, they report a big discrepancy between their desired and perceived self–other integration (Slotter et al., 2010). As a result, these individuals seek to reduce this discrepancy by altering their self-concepts in an attempt to integrate more fully with close others (e.g., Mikulincer

and Shaver, 2005, Mikulincer and Shaver, 2007). In exchange for maintaining closeness with significant others (through merging with close others), individuals who are high in attachment anxiety are thought to have a less stable self-concept and experience greater self-concept confusion, especially following separation (Slotter et al., 2010).

Individuals high in attachment anxiety have also been shown to manifest high levels of self-alienation (Lopez et al., 2015). Attachment anxiety has been characterized by excessive fear of separation/abandonment (Mikulincer & Shaver, 2012). According to the findings of a recent study, individuals showing elevated levels of adult separation anxiety symptomology presented lower levels of SCC (Posavac & Posavac, 2020). In this respect, although individuals high in attachment anxiety form close relationships with others, unlike their avoidant counterparts, they may still experience low SCC since they have low self-esteem, aspire as well as tend to merge with close others, and have an intense fear of separation.

3.1.3. Self-concept clarity and empathy

Since the self–other distinction is mentioned by many researchers as a key aspect of empathy (e.g., Bird & Viding, 2014; Lamm et al., 2016), further research is needed to understand the psychological factors that can facilitate this distinction. Carl Rogers (1959) called attention to the importance of recognizing self and other as different entities in order to be able to empathize with others, which justifies the importance of investigating SCC. Krol and Bartz (2021) described the potential impact of this recognition as follows: “a strong sense of self should allow one to share the experience of another in distress, while maintaining an awareness of whose feelings belong to whom and, in this way, facilitate empathic concern and, ultimately, helping the person in need” (p. 3). In other words, a strong, stable, and clear sense of self may allow individuals to empathize with others in distress, while leading to a conscious awareness of and distinction between their own and others' emotions.

As Batson et al. (1997) noted, difficulties with the self–other distinction can make one vulnerable to “empathic personal distress”—a self-focused, aversive reaction that often leads to withdrawal from an empathy-inducing situation in order to alleviate one's own discomfort. Empathic concern, on the other hand, is a further aspect of empathy that requires a greater ability to differentiate the self from the other (Batson et al., 1997). This aspect of empathy has been observed to generate an altruistic motivation to relieve the other's distress. In this sense, low SCC

may predispose individuals to feel personal distress, whereas empathic concern may profit from higher levels of SCC. Indeed, in their recent study Krol and Bartz (2021) found that a clear and stable sense of self was crucial for both empathy and helpful behavior.

Despite the suggested links between attachment, SCC, and the different aspects of empathy, they had not previously been examined simultaneously within one model. The present research therefore assessed the mediating role of SCC in the association between aspects of empathy and adult attachment. The research was thus exploratory and aimed to examine whether the supposed mediation effect of SCC on the relationship between attachment and empathy could be supported. Two studies were conducted. In Study 1, we examined the relationship between attachment orientations (i.e., attachment anxiety and attachment avoidance) and SCC. In Study 2, we examined whether the effect of attachment orientations on aspects of empathy (i.e., empathic concern and personal distress) would be mediated by SCC. We included both empathic concern and personal distress, since they are the two motivational states to which empathy can lead and may have differential outcomes in terms of empathic response, as mentioned above (Batson et al., 1997; see also Jordan et al., 2016).

3.2. Study 1

In this initial study, we investigated whether SCC is in fact associated with attachment anxiety and avoidance. More specifically, we checked the hypotheses that those high in attachment anxiety (Hypothesis 1a) or high in attachment avoidance (Hypothesis 1b) would be predisposed to have poor SCC. We also controlled self-esteem, which has been consistently shown to be strongly associated with SCC in previous research (e.g., Kawamoto, 2020; Wong et al., 2016). We expected that attachment orientations would predict SCC when we controlled for self-esteem, since Wu (2009) found in his study that SCC is not due to high versus low self-esteem but to the underlying psychological sense of security inherent in attachment orientations. In this respect, SCC can be viewed as a function of the sense of (in)security that stems from attachment orientations.

3.2.1. Method

3.2.1.1. Participants and procedure

Six hundred and two participants (Mage = 22.09, SDage = 4.83, range 18–35; 453 women [75 %]) were recruited from the researchers' university in Hungary. The relevant permissions to run the

study were granted by the university's ethics committee. Students obtained credits in return for their participation. They completed the questionnaires online, via Qualtrics, having first read the informed consent form and agreed to participate. All participants completed the Experiences in Close Relationships–Revised (ECR-R) questionnaire and the Self-Concept Clarity Scale. All scales were presented within randomized order.

3.2.1.2. Measures

3.2.1.2.1. Self-concept clarity

Self-concept clarity was assessed using the SCC Scale (SCCS; Campbell et al., 1996). This is a 12-item self-report measure of the extent to which one's self-concept is clearly and confidently defined (e.g., “Even if I wanted to, I don't think I could tell someone what I'm really like”), internally consistent (e.g., “My beliefs about myself often conflict with one another”), and stable (e.g., “My beliefs about myself seem to change very frequently”). Responses were given on a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Higher scores reflected greater SCC. The internal consistency reliability of the scale was good (*Cronbach's α* = 0.93).

3.2.1.2.2. Self-esteem

Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). The RSES consists of 10 items rated on a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The internal consistency reliability of the scale was good (*Cronbach's α* = 0.90).

3.2.1.2.3. Attachment

Attachment orientations were measured using the Hungarian version of the ECR-R (Fraley et al., 2000). The questionnaire contains 18 items for each attachment orientation (i.e., attachment anxiety and attachment avoidance), making a total of 36 items. Participants rated the items on a 7-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. Higher scores indicated higher attachment anxiety and avoidance. Items included: “I worry a lot about my relationships” in the case of attachment anxiety; and “I don't feel comfortable opening up to other people” in the case of attachment avoidance. The reliability indices showed good internal consistency for both anxiety (*Cronbach's α* = 0.93) and avoidance (α = 0.91).

3.2.2. Results and discussion

Table 1 presents the descriptive statistics and correlations between attachment orientations and SCC. Attachment anxiety and attachment avoidance were negatively related with SCC and self-esteem, whereas self-esteem positively associated with SCC.

Table 1

Descriptive Statistics and Correlations Between Attachment Orientations and Self-Concept Clarity

	Variable	M	*SD*	A	1	2	3	4
1.	Attachment anxiety	3.254	1.202	0.93	-	0.39**	-0.51**	-.056**
2.	Attachment avoidance	2.757	0.974	0.91		-	-0.35**	-0.36**
3.	Self-esteem	2.778	0.615	0.90			-	0.64**
4.	SCC	4.307	1.294	0.92				-

N= 602; **$p < .001$

We then ran a linear regression analysis to investigate the effect of attachment on SCC when controlling for self-esteem. We included self-esteem, sex, and age as covariates. As expected, and in line with earlier findings, linear regression analyses revealed a significant effect of attachment orientations on SCC when controlling for the covariates—attachment anxiety: $b = -0.28$, $\beta = -0.27$, $t(596) = -7.644$, $p < .001$, 95 % CI (−0.36, −0.21); attachment avoidance: b = −0.14, $\beta = -0.10$, $t(596) = -3.15$, $p < .05$, 95 % CI (−0.22, −0.05); $R^2 = 0.50$, $F(5,596) = 99.34$, $p < .001$. These results indicate that the absence of a clear and coherent sense of self is significantly associated with high attachment avoidance and attachment anxiety (see also Table S1)

Attachment anxiety and avoidance were consistently associated with lower SCC, and none of the effect of attachment orientations was lost when we controlled for self-esteem. Our analysis demonstrated the significant and substantial effect of attachment anxiety and attachment avoidance on SCC. Study 1 thus provided evidence for the direct effect of both attachment anxiety and attachment avoidance on SCC.

3.3 Study 2

Having established in Study 1 that low SCC is associated with higher attachment anxiety as well as higher attachment avoidance, we wanted to extend our findings to investigate whether SCC plays a role in the association between attachment and empathy. We also wanted to investigate whether SCC is related with empathy—that is, with empathic concern and personal distress. To this end, we applied the most commonly used self-report measure of dispositional empathy, the Interpersonal Reactivity Index (IRI; Davis, 1983). The IRI includes an empathic personal distress subscale that assesses the tendency to experience self-oriented feelings of anxiety and unease when exposed to another's negative experience, as well as an empathic concern subscale that assesses the tendency to experience other-oriented feelings of sympathy and concern for a person in need. Based on earlier findings (Krol & Bartz, 2021), we expected low SCC to be associated with less empathic concern (Hypothesis 2a) and greater personal distress (Hypothesis 2b). Also, we expected attachment anxiety to be positively associated with personal distress and empathic concern (Hypothesis 3a). Regarding attachment avoidance, we expected there to be no association, or a negative association, with personal distress and empathic concern (Hypothesis 3b). Finally, SCC was expected to mediate the association between attachment anxiety and personal distress as well as empathic concern (Hypothesis 4). We had no specific expectations regarding its mediating effect on the association between attachment avoidance and aspects of empathy, since attachment avoidance has been shown to be characterized by the suppression of interpersonal relationships, which may also include empathy. In Study 2, rather than restricting participation to university students, we used an online representative sample, which gave us an opportunity to investigate the attachment and SCC relationship among a broader and more representative adult sample.

3.3.1. Participants and procedure

A thousand participants were recruited by a Hungarian survey company (Synapse Market Research and Consulting; *Mage* = 47.99; *SDage* = 16.72; range 18–83; 531 female [53.1 %]). Participants completed the questionnaires online via the survey company's system and they were not paid for their time. Permission to implement the study was obtained from the researchers' university's ethics committee. Participants first read the informed consent form and completed the questionnaire only if they agreed to participate. The data used within the present study are part of a large dataset belonging to a comprehensive study carried out by our research group and because self-esteem

was not relevant with the study carried out by the mentioned large dataset, it is not included within the data gathering process and as a result self-esteem is not controlled for the following set of analyses. All scales were presented within the randomized order.

3.3.2. Measures

3.3.2.1. Self-concept clarity

In Study 2, we used the same SCC scale as in Study 1. The internal consistency reliability of the scale was adequate (*Cronbach's α* = 0.91).

3.3.2.2. Attachment

We used the short-form, 12-item version of the Experiences in Close Relationships questionnaire (ECR-S; Wei et al., 2007) that had been used in the first study. The internal consistency reliability of the scale was adequate for both attachment anxiety (Cronbach's α = 0.91) and attachment avoidance (*Cronbach's α* = 0.90).

3.3.2.3. Empathy

We used the IRI (Davis, 1983) to assess dispositional empathy. Two subscales were applied: empathic personal distress (e.g., "When I see someone who badly needs help in an emergency, I go to pieces"); and empathic concern (e.g., "I often have tender, concerned feelings for people less fortunate than me"). Participants responded to each item using a 5-point Likert scale ranging from 1 = does not describe me well to 5 = describes me very well. Higher scores indicated higher levels of empathic concern and personal distress. The internal consistency reliability of the scales was adequate for both empathic concern (*Cronbach's α* = 0.59) and personal distress (*Cronbach's α* = 0.76).

3.3.3. Results and discussion

3.3.3.1. Preliminary analyses

Table 2 presents the descriptive statistics and correlations between the attachment orientations, SCC, and empathy subscales. As in Study 1, attachment anxiety and attachment avoidance negatively related with SCC. SCC was positively correlated with empathic concern whereas negatively with personal distress. Attachment anxiety was positively associated with empathic

concern and personal distress. Attachment avoidance presented a negative relationship with empathic concern whereas the association with personal distress was not significant.

Table 2

Descriptive Statistics and Correlations Between Attachment Orientations, Empathy, and Self-Concept Clarity

	Variable	M	SD	A	1	2	3	4	5
1.	Attachment anxiety	3.73	1.35	0.91	-	0.48*	0-.54**	0.09**	0.51**
2.	Attachment avoidance	2.68	1.02	0.90		-	-0.13**	-0.19**	-0.02
3.	SCC	3.56	0.88	0.91			-	0.12**	-0.37**
4.	Empathic concern	3.76	0.70	0.59				-	0.30**
5.	Personal distress	3.12	0.95	0.76					-

N = 1000; **$p < .001$

In line with the findings of Study 1, linear regression analyses revealed a significant effect of attachment orientations on SCC—attachment anxiety: $b = -0.31$, $\beta = -0.48$, $t(994) = -18.31$, $p < .001$, 95 % CI (−0.35, −0.28); attachment avoidance: $b = -0.11$, $\beta = -0.13$, $t(994) = -5.10$, $p < .001$, 95 % CI (−0.16, −0.07); $R^2 = 0.36$, $F(5,994) = 113.73$, $p < .001$. These results indicate that the absence of a clear, stable, and coherent sense of self was associated with high attachment avoidance and attachment anxiety (see also Table S2).

3.3.3.2. Mediation analyses

We tested all mediation models using the PROCESS macro (Model 4) in SPSS (Hayes, 2013), with 5000 bootstrapped samples. Self-concept clarity was tested as a mediator between attachment orientations (i.e., attachment anxiety and attachment avoidance) and empathy (i.e., empathic concern and personal distress). Indirect effects (IEs) were subsequently presented.

3.3.3.2.1 Empathic concern

First, we ran a model in which we checked SCC as the mediator between attachment anxiety and empathic concern. The results indicated that both the total effect, *B*total = 0.054, *SE* = 0.016, *β*total = 0.105, 95 % CI (0.022, 0.086), and the direct effect, *B*direct = 0.098, *SE* = 0.018, βdirect = 0.191,

95 % CI (0.061, 0.135) of attachment anxiety on empathic concern were significant. Overall, SCC partially mediated the relationship between attachment anxiety and empathic concern (βIE = −0.085, 95 % CI [−0.125, −0.048]). The overall model explained 9 % of empathic concern, R^2 = −0.091, F(5,935) = 18.94, p < .001. For the regression coefficients, see Fig. 1.

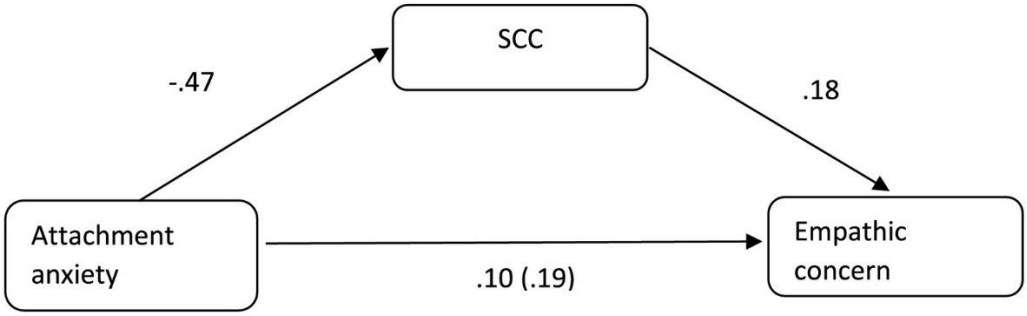

Fig. 1. Mediation model for attachment anxiety predicts empathic concern through SCC.

Note. SCC partially mediates the association between attachment anxiety and empathic concern. Paths are standardized coefficients. The direct effect is presented in brackets. All paths are significant (p < .05).

We also ran a model in which we checked SCC as the mediator between attachment avoidance and empathic concern. The results indicate that both the total effect (βtotal = −0.189, SE = 0.029, 95 % CI [−0.187, −0.072]), and the direct effect (βdirect = −0.183, SE = 0.029, 95 % CI [−0.183, −0.068]) of attachment avoidance on empathic concern were significant. However, SCC did not mediate the relationship between attachment avoidance and empathic concern (βIE = −0.006, 95 % CI [−0.017, 0.001]). The overall model explained 5 % of empathic concern, R^2 = 0.048, F(5,995) = 17.67, p < .001.

3.3.3.2.2 Personal distress

We ran a model in which we checked SCC as the mediator between attachment anxiety and personal distress. The results indicate that both the total effect (βtotal = 0.508, SE = 0.0196, 95 % CI [0.318, 0.395]) and the direct effect (βdirect = 0.429, SE = 0.022, 95 % CI [0.257, 0.345]) of attachment anxiety on personal distress were significant. Overall, SCC partially mediated the relationship between attachment anxiety and empathic concern (βIE = 0.079, 95 % CI [0.048, 0.111]). The overall model explained 28 % of personal distress, R^2 = 0.277, F(5,994) = 76.34, p < .001. For the regression coefficients, see Fig. 2.

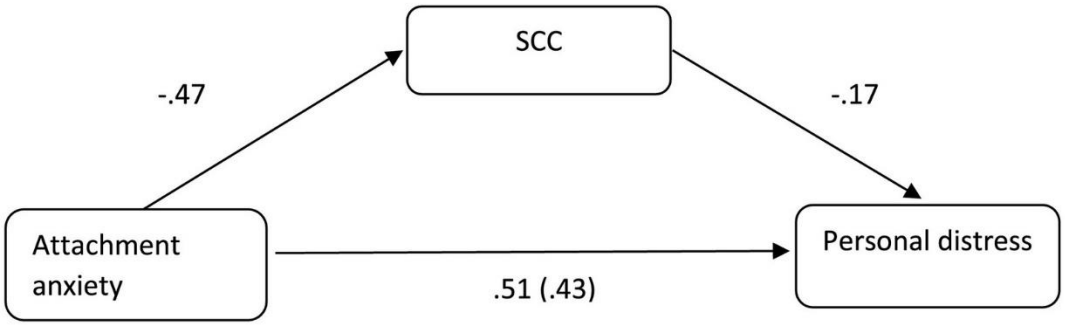

Fig. 2. Mediation model for attachment anxiety predicts personal distress through SCC.

Note. SCC partially mediates the association between attachment anxiety and personal distress. Paths are unstandardized coefficients. The direct effect is presented in brackets. All paths are significant ($p < .05$).

We also ran a model in which we checked SCC as the mediator between attachment avoidance and personal distress. The results indicate that neither direct effect (βdirect = −0.071, *SE* = 0.038, 95 % CI [−0.140, 0.007]) nor the total effect (βtotal = −0.030, *SE* = 0.040, 95 % CI [−0.107, 0.051]) of attachment avoidance on personal distress was significant. SCC did not mediate the relationship between attachment avoidance and personal distress (βIE = 0.041, 95 % CI [−0.007, 0.075]). The overall model explained 14 % of personal distress, $R^2 = 0.142$, F(5,994) = 43.39, $p < .001$.

Overall, the results of the mediation analyses indicate that SCC functions as a mediator only in the case of attachment anxiety and its associations with personal distress and empathic concern.

3.4. General discussion

The ability to differentiate between self and other is crucial for empathy. The self–other distinction requires a clear, coherent, and stable sense of self. The attachment system, on the other hand, is key to developing a sense of self and the self–other differentiation, based on the quality of the individual's relationship (sense of security) with their caregiver. Since a sense of (in)security is inherent in attachment orientations, attachment orientations may affect SCC, while both attachment orientations and SCC may influence empathy. In this context, we investigated the possible associations between attachment orientations, SCC, and aspects of empathy. We tested our hypotheses across two studies involving a total of 1553 students and community participants.

Attachment avoidance and attachment anxiety were consistently associated with poor SCC (Studies 1 & 2). Attachment anxiety was positively associated with personal distress and empathic concern, while attachment avoidance was negatively associated with empathic concern but showed no significant relationship with personal distress (Study 2). Low SCC was an indicator for poor empathic concern but greater personal distress (Study 2). The findings indicated that SCC mediated the association between attachment anxiety and personal distress as well as empathic concern, while in the case of attachment avoidance there was no mediation effect of SCC on aspects of empathy. It can therefore be concluded that attachment anxiety is a key determinant, and that SCC mediates its effect on aspects of empathy.

Our findings in terms of attachment orientations and SCC were in line with our expectations—that is, individuals with higher levels of attachment anxiety or attachment avoidance reported lower levels of SCC across the two studies. We found evidence for the above association patterns among both the student and community samples. The relevant results from the present study are in line with earlier research. In their five studies, Emery et al. (2018) reported high levels of attachment avoidance as a threat to a clear sense of self.

We found evidence supporting our hypothesis that SCC would be associated with empathy. Specifically, we showed that individuals with low SCC reported higher personal distress and low empathic concern. Thus, an unclear sense of self predisposes an individual to experience greater self-focused distress and less other-oriented concern when confronted with another individual in distress. In other words, without a clear and coherent sense of self to draw on, individuals seem to have more trouble distinguishing their own distress from that of another person, which is manifested in heightened personal distress and lowered empathic concern. Our findings are in line with earlier research. Krol and Bartz (2021), across five studies that included both correlational and causal interpretations, reported that a clear self–other differentiation is of the utmost importance not only in terms of mature and adaptive empathic responses but also for actual helpful behavior.

Self-concept clarity mediated associations with aspects of empathy only in the case of attachment anxiety. Bearing in mind that the strongest relationship in the case of attachment anxiety was with personal distress, this may be due to the excessive motivation among individuals high in attachment anxiety to merge with others in their attempt to find closeness, which may

predispose them to being unable to differentiate between their own and others' distress, while making them more vulnerable to personal distress. In their study, Krol and Bartz (2021) reported that greater self–other merging may be one of the mechanisms underlying the emphatic difficulties experienced by individuals with low SCC. Our findings contribute to this work by showing that a clear and coherent sense of self has an additional effect in the case of attachment anxiety—prompted by the tendency toward excessive self–other merging (Mikulincer & Shaver, 2016)—when empathizing with others.

It should be noted that our results revealed only a partial mediation effect of SCC in the case of attachment anxiety, and no mediation effect at all in the case of attachment avoidance. In other words, although resisting interdependence impairs an individual's clear sense of self (Studies 1 & 2), SCC seems to be irrelevant with respect to empathy among individuals high in attachment avoidance. Since attachment avoidance was shown to be associated with low levels of personal distress (Study 2), it may be the case that individuals high in attachment avoidance are using mechanisms (e.g., emotion regulation) other than the self–other distinction when it comes to empathy. As attachment avoidance is characterized by a fear of closeness, which is accompanied by negative IWMs of others, individuals with high levels of attachment avoidance may be applying deactivation strategies (i.e., repressing emotional states that can evoke the attachment system while maintaining compulsive self-reliance; Mikulincer & Shaver, 2007) in the case of empathic processes (manifesting as low levels of personal distress and no empathic concern in Study 2) while not engaging self-related mechanisms at all. Specifically, these individuals may automatically disengage from the distressing stimuli (e.g., perceptions of others' discomfort) before engaging the self, in an attempt to block or inhibit any emotional state that is incongruent with the goal of keeping their attachment needs deactivated (Mikulincer & Shaver, 2016). Indeed, attachment avoidance has been linked with avoidance-focused coping strategies that include minimizing, denial, or withdrawal from stressors (Marriner et al., 2014). Future research might usefully investigate the role of emotion regulation strategies (i.e., hyperactivation and deactivation) along with SCC with respect to the association between attachment and empathy to provide a deeper understanding.

The present research has several strengths, including the large sample sizes (total N = 1553); the combination of student (Study 1) and community (Study 2) participants; and internal

replications and consistent results across the different samples (i.e., the relationships between attachment orientations and SCC). Furthermore, the present research contributes to filling a gap in the literature on attachment and empathy by emphasizing that SCC has additional effects on associations between attachment anxiety and the affective aspects of empathy associations. To the best of our knowledge, no previous research has demonstrated links among SCC, attachment orientations, and empathy in combination.

Despite these strengths, some limitations should also be noted. First, we included in the present research only empathic concern and personal distress, which are the affective aspects of empathy. The dynamics among all the variables used in the present research may differ in terms of the cognitive aspects of empathy (i.e., perspective taking and fantasy). For example, Krol and Bartz (2021) found that SCC was negatively associated with fantasy, whereas there was no association with perspective taking. The authors concluded that a weak sense of self is not necessarily related to the adoption of another's perspective, while they also suggested that the findings for the fantasy subscale should be treated with caution, since it is not clear what this scale in fact measures (see also Nomura & Akai, 2012). Moreover, the psychometric properties of the IRI may be impaired, since we included only the empathic concern and personal distress subscales, which may explain why we obtained a relatively low reliability ($\alpha = 0.59$) score for the empathic concern subscale. Future research might usefully include cognitive aspects in terms of both theory and statistics.

We approached attachment orientations as relatively stable and trait-like characteristics. However, recent literature suggests context- or relationship-specific attachment models (Fraley et al., 2015), according to which empathic processes or responses may change as a result of situational or contextual factors (Cassidy et al., 2018). Furthermore, individuals with a more insecure overall attachment style can also benefit from situational factors that promote a sense of felt security, as demonstrated in priming studies (e.g., Gillath & Karantzas, 2019). Importantly, we do not claim that attachment orientations or SCC are the single most important mechanisms contributing to empathy, or that attachment theory provides a comprehensive meaning framework. A host of other psychological and social mechanisms play a role in shaping empathic processes (see emotion regulation; Thompson et al., 2019). However, we do believe that attachment orientations deserve increased attention in this context.

In conclusion, the present study is innovative in that it highlights the importance of the self and attachment orientations in combination for empathy. In general terms, this study contributes a new perspective to research on the association between attachment and empathy by including and treating SCC as a characteristic of felt security stemming from attachment experiences. In the present study, attachment orientations and SCC are linked to explain individual differences in aspects of empathy, while sense of security (i.e., attachment orientations) and theory of mind (i.e., the ability to differentiate between self and other) are introduced as theoretical bases for the incorporation of these constructs into empathy. We have demonstrated that a clear, coherent, and stable sense of self is derived from the attachment system and differs across attachment orientations, while both attachment orientations and SCC are important elements of empathy.

Table S1

SCC from attachment orientations

	Step 1 *b*(Cl 95%)	Step 2 *b*(Cl 95%)	Step 3 *b*(Cl 95%)
Sex (1=Male; 0=female)	0.24* (0.01;0.48)	0.14 (-0.04;0.32)	0.23** (0.05;0.40)
Age	0.05** (0.03;0.07)	0.03** (0.02;0.04)	0.02* (0.01;0.04)
Self Esteem		1.30** (1.17;1.43)	0.94** (0.80;1.08)
Attachment anxiety			-0.28** (-0.36; -0.21)
Attachment avoidance			-0.14* (-0.22; -0.05)
R^2	0.05	0.42	0.50
ΔR^2	0.02	0.37	0.08
F	17.14**	147.66**	119.24**

*p<.05; **p<.001

Table S2

Self-concept clarity predicted by attachment orientations

	Step 1 *b* (Cl 95%)	Step 2 *b* (Cl 95%)
Sex (1= male, 0=female)	-0.13* (-0.23; -0.03)	-0.02 (-0.14; 0.09)
Education	0.09* (0.02; 0.16)	0.04 (-0.01;0.10)
Age	0.01** (0.01; 0.02)	0.01** (0.01;0.02)
Attachment anxiety		-0.30* (-0.34; -0.27)
Attachment avoidance		-0.10 (-0.16; -0.05)
R^2	0.14	0.36
ΔR^2		0.12
F	55.90**	113.93**

Note. N:1000; *p<.05, **p<.001

4. Attachment security schemas to attenuate the appeal of benevolent sexism: The effect of the need to belong and relationship security (Study 3)

Abstract

Previous research has repeatedly shown a positive association between the need for relationship security and the appeal of benevolent sexism. Possibly, no studies to date had investigated the role of the need to belong with respect to a preference for the ideal partner to endorse benevolently sexist attitudes. Attachment security is considered to attenuate the need for relationship security and to divert the focus from the need to belong. Study 1 therefore investigated potential associations among attachment anxiety, the need to belong, and the appeal of benevolent sexism. It also examined whether the association between the need to belong and a preference for the ideal partner to hold benevolently sexist attitudes is moderated by attachment anxiety. In Study 2, we used a causal design to confirm the findings from Study 1 through the activation of attachment security schema. A moderated regression analysis showed significant interactive effects between the need to belong and attachment anxiety—that is, a positive association between the need to belong and the appeal of benevolent sexism was found only among people high in attachment anxiety. Secure-base scripts attenuated the need to belong as well as the appeal of benevolent sexism. The present findings suggest the importance of attachment schemas in influencing preference for specific partner attitudes through the need to belong and relationship security.

Keywords: Need to belong; Attachment anxiety; Need for relationship security; Benevolent sexism

4.1 Introduction

Due to the emphasis placed on men's obligation to cherish, protect, and provide for their female partners, benevolent sexism (BS) is thought to play a pivotal role in sustaining gender inequality, since its romantic overtones mask the way in which these attitudes can interfere with women's independence, ambition, and competence (Glick & Fiske, 1996). In the context of attachment theory and the need to belong (NTB), the two present studies examined why some women tend to find BS appealing despite the costs. Baumeister and Leary (1995) proposed that "human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships" (p. 497). Although NTB is a fundamental motivation, the strength of that motivation differs among individuals (Leary et al., 2006). Furthermore, within the belongingness orientation model, Lavigne et al. (2011) describe two distinct orientations in terms of the different drives behind fulfilling NTB. According to this approach, individuals either genuinely have an interest in others and perceive a connection with others as the basis for interpersonal and individual development (i.e., growth orientation) or they desire the closeness of others due to constant worry over social acceptance (i.e., deficit-reduction orientation). Individuals strongly motivated by the latter orientation are assumed to need great reassurance, seek acceptance to feel secure, and experience high levels of fear of rejection.

Social experiences during the early years of life have the potential to shape individuals' ability to satisfy their fundamental psychological needs, including NTB (McClelland, 1985). Attachment theory (Bowlby, 1969) postulates internal working models (IWMs) of the self, as well as of others, which are built through continuous infant–caregiver relationship patterns and develop into a specific set of expectations, attitudes, perceptions, and behaviors in terms of bonding with others later in life (Bartholomew, 1990; Mikulincer & Shaver, 2007). For example, individuals who experienced inconsistent care from their caregivers (i.e., individuals with high attachment anxiety) tend to have a greater fear of rejection as well as greater concerns regarding acceptance compared to counterparts whose caregivers provided consistent affection (Bowlby, 1969; Mikulincer & Shaver, 2007). Since the relationship patterns these individuals experienced throughout their developmental years lacked continuity of care, affection, and trust, unlike those experienced by counterparts high in attachment security, their NTB has never been fully satisfied,

thus elevated levels of NTB, the enhanced pursuit of its satisfaction, and the fear of losing acquired relationships may be ongoing (see also Lavigne et al., 2011).

In addition, such individuals have an intense need for relationship security—for example, men who endorse benevolent sexist attitudes, which promise investment in the relationship as well as the partner, seem to strongly appeal to women with high attachment anxiety (Cross & Overall, 2018). Following this research path, we assumed that attachment orientation might play a significant role in terms of the strength of NTB as well as partner preferences. In Study 1, we discussed and tested the assumption that men's BS might be appealing to women who have high levels of attachment anxiety due to increased NTB. Study 2 took the form of an experimental study in which the activation of attachment security schema was tested for its effect on reducing NTB as well as on preference for a partner with benevolent sexist attitudes.

4.1.1 Attachment anxiety and the appeal of BS

According to ambivalent sexism theory (Glick & Fiske, 1996), sexist attitudes are endorsed due to BS that counterbalances the costs of hostile sexism (HS). Hostile sexism encompasses the belief that women are weak, and subordinate compared to men (dominative paternalism), that women lack the necessary traits to be strong, authoritative leaders (competitive gender differentiation), and that women are tempters who use sex to manipulate men and gain power (heterosexual hostility; Glick & Fiske, 1996). Even though HS is a strong tool for sustaining men's social power by means of negative attitudes toward women who threaten men's dominance, its overt nature ensures that these attitudes are recognized as "sexist" and are typically rejected by women (Bohner et al., 2010; Chisango & Javangwe, 2012; Glick et al., 2000). Moreover, when intimate contexts are considered, HS becomes ineffective because the aggressive responses associated with such attitudes elicit resistance on the part of female partners that interfere with intimacy and satisfaction in heterosexual relationships (Hammond & Overall, 2017; Overall et al., 2011).

Benevolent sexism encompasses a set of expectations regarding the roles that men and women should play within intimate relationships (Glick & Fiske, 1996). It is seen as necessary for the maintenance of gender inequality because, unlike HS, while it magnifies gender differentiation and paternalism, BS also promises heterosexual intimacy (Glick & Fiske, 1996). Benevolent sexism presents a romantic relationship script according to which women are nurturing, loyal, and caring and prioritize their relationship as well as their partner in a way that complements men's

competence and strength (complementary gender differentiation). In return, men are supposed to chivalrously and devotedly protect and provide for women, and invest in the relationship (protective paternalism), since men are dependent on women to fulfil their intimate relationship needs (heterosexual intimacy; Glick & Fiske, 1996). Thus, while HS works to maintain male dominance in society by punishing women who contest men's power, BS allows men to secure power as well as satisfy their need for intimate relationships with women.

The protective attitudes associated with BS are identified as "sexist" because, as shown by earlier research, BS maintains men's societal advantages by emphasizing women's interpersonal qualities and their importance in the relationship domain while reducing their competence and ambition outside the home (e.g., Barreto et al., 2010; Dardenne et al., 2007). Benevolent sexism facilitates men's structural power and maintains the gender status quo by framing men as more competent than women (Delacollette et al., 2013; Ramos et al., 2018), while individuals who endorse BS support beliefs that justify the system (e.g., men are more capable and thus make better leaders; Russo et al., 2014). Research has shown that exposure to, as well as endorsement of, benevolent sexist attitudes undermine women's interests in terms of obtaining personal power and independence, their performance in cognitive tasks, their self-esteem, and their self-efficacy in the workplace (Dardenne et al., 2007; Jones et al., 2014). Exposure to benevolent sexist attitudes disrupts performance on cognitive tasks, shifts women's self-construal and autobiographical memories toward incompetence, and encourages them to define their worth through interpersonal, warmth-based qualities (e.g., Barreto et al., 2010; Dumont et al., 2010). Accordingly, women who endorse BS more strongly have lower educational and career ambitions (Fernández et al., 2006; Guimond et al., 2006), show greater willingness to adopt domestic roles (Lee et al., 2010), believe that they should support their husband's career and do the housework (Chen et al., 2009), and support their partner's personal goals while providing greater relationship-oriented support (Hammond & Overall, 2015). They are also more likely to seek dependency-oriented help from men (Shnabel et al., 2016).

Despite these costs, women often have a positive perception of men's protective paternalism (i.e., the belief that men should protect, cherish, and provide for women) and consider it to be intimacy rather than sexism in the context of a romantic relationship (Sarlet et al., 2012). This perception is consistent with the definition of BS as an "insidious" ideology: Women prefer

BS because they respond to its subjectively positive appearance while being unaware of its subtly harmful effects (Goh & Hall, 2015). However, Gul and Kupfer (2019) found that women prefer BS despite being aware of its harmful consequences because the desirable aspects of a man's benevolent attitudes and behaviors—such as overtly signaling a willing to invest in the relationship—outweigh the potential downsides. Accordingly, women are revered for their relational competence and can expect protective, caring behavior from male partners who endorse BS (Overall et al., 2011), thus men are able to secure satisfying relationships while also maintaining greater social power as providers outside the home (Hammond & Overall, 2013; Hammond et al., 2016). The assumption that men will be chivalrous providers and willing to invest may explain why some women find BS appealing. Indeed, women are more likely to perceive men who personify the characteristics associated with BS as relatively attractive due to their assumed future investments (e.g., protection, devotion, commitment, and constancy) (Bohner et al., 2010; Chisango & Javangwe, 2012; Gul & Kupfer, 2019).

Nevertheless, the cultural ideal of BS seems to offer more than chivalry: The permanence of men's reverence, protection, and provision may be seen as guaranteeing women security in heterosexual relationships. Accordingly, men are assigned role-based responsibility and an obligation to be the devoted protectors and providers of their female partners (Chen et al., 2009; Glick & Fiske, 1996). Furthermore, because of the strong emphasis in BS on being dependent on females and complete only with the love of a woman, men are expected to prioritize their relationship with and duty to their partner, even if means personal hardship (Glick & Fiske, 1996). These elements may give women a sense of security in terms of their partners' continued devotion and reliability. Indeed, according to this conceptualization, women who perceive their male partners as endorsing BS believe that their partners will prioritize the relationship, can be relied on to remain invested in the relationship, and will adhere to their obligations to be devoted partners (Hammond et al., 2016).

The question of whether women who need greater relationship security and who are afraid of abandonment prefer benevolently sexist partners compared to their counterparts who are low in attachment anxiety is critical for an understanding of whether it is the promise of relationship security that underpins their attraction to BS. Attachment theory (Bowlby, 1969) provides a basis for recognizing the need for relationship security through one of the attachment orientations:

attachment anxiety. Attachment anxiety is characterized by the use of attachment hyperactivation strategies, including intense demands for care as well as clinging behavior toward others, to regulate the emotions (Mikulincer & Shaver, 2017). In order to obtain the support and care they crave, individuals who are high in attachment anxiety mostly present themselves as helpless, dependent, or needy. This is the consequence of their early attachment experiences: These individuals experienced inconsistent availability on the part of their caregivers and learned that exaggerated expressions of needs and vulnerability were the only way to obtain support and protection (Mikulincer and Shaver, 2003, Mikulincer and Shaver, 2016, Mikulincer and Shaver, 2017; Shaver & Mikulincer, 2007). They are more likely to use their partners as the primary source of support, they are eager to share intimate information early in the relationship, they show greater jealousy, and they demonstrate an excessive need for reassurance and approval due to fear of separation (Eastwick & Finkel, 2008; Mikulincer & Shaver, 2017).

Individuals who are high in attachment anxiety are typically fearful of rejection and abandonment, idealize romantic relationships, are preoccupied with intimacy, and harbor an intense and persistent need for security within their relationships (Hazan & Shaver, 1987; Mikulincer & Shaver, 2003; Simpson & Rholes, 2012). Constant fear of abandonment leaves these individuals fixated on obtaining reassurance of their partners' love and commitment due to their heightened need for relationship security (Overall et al., 2014; Shaver et al., 2005). These patterns are deeply rooted in IWMs—mental representations of the self and others—in which individuals high in attachment anxiety have negative views of their own abilities to meet their core needs and more positive views of others' abilities to fulfil them (Gillath et al., 2016; Hazan & Shaver, 1987). Tran and Simpson (2009) found that individuals with higher levels of attachment anxiety maintain a sense of belonging and attenuate their fear of abandonment by overestimating their core relational needs and facilitating intimacy as well as security to satisfy these needs. Individuals who frequently seek reassurance about their partner's love and commitment in order to feel intimate and secure idealize their romantic partner and romantic love in general, which is consistent with the benevolent sexist ideology that heterosexual romance is necessary for a sense of completeness (Glick & Fiske, 1996; Hart et al., 2012). Indeed, a recent meta-analysis found that people with higher attachment anxiety, who are thus more preoccupied with meeting relational needs, consistently report stronger endorsement of BS (Fisher & Hammond, 2019).

The chivalrous tone of BS encompasses dependency-oriented support—a type of support that positions the recipient as weak and in need of guidance and which is often manifested by the helper directly handling the recipient's issues/tasks (Nadler, 1997). Men who believe that women should be cared for and protected, and that women are needed in order for them to feel complete, may provide women with dependency-oriented support to satisfy relational needs. Indeed, Shnabel et al. (2016) observed that when exposed to benevolent sexist remarks (e.g., "Women should be cherished and protected by men"), men tended to offer women more dependency-oriented support and women tended to seek more dependency-oriented support from men. Hammond and Overall (2015) showed that men who more strongly endorsed BS tended to provide their partners with more dependency-oriented support by offering direct advice and instruction and discounting their partners' abilities to pursue personal goals on their own. In order to fulfil relational needs and obtain a feeling of security and intimacy within their intimate relationships, individuals high in attachment anxiety were found to have a greater craving for dependency compared to counterparts low in attachment anxiety (Overall & Cross, 2019). In this sense, women high in attachment anxiety might look for a partner who holds benevolent sexist attitudes and who promises dependency-oriented support, as this guarantees intimacy and the permanency and security of the relationship.

4.1.2 The inclusion of NTB

The need to belong is a fundamental human need that must be included and accepted in meaningful relationships with other individuals and social groups. Failure to fulfil this need results in the significant impairment of mental health and wellbeing (Arslan & Allen, 2021; Li & Jiang, 2018). Although NTB resembles attachment, the researchers who came up with the NTB hypothesis—Baumeister and Leary (1995)—suggested that NTB differs from Bowlby's attachment theory (1969) in that the focus is not exclusively on a single attachment figure. The authors also noted that relationships characterized by strong feelings of attachment, intimacy, or commitment but lacking regular interaction will fail to satisfy NTB.

Baumeister and Leary (1995) highlighted one feature of NTB that we believe may be closely related to attachment anxiety and a preference for BS in a potential partner. According to this feature, the individual needs to perceive that an interpersonal bond or relationship is marked by stability, affective concern, and continuation into the foreseeable future. Baumeister and Leary

(1995) added that the perception of such a bond is not rewarding in the context of casual relationships with strangers or acquaintances. Instead, individuals benefit from interactions with a significant person in the context of an ongoing relationship. Frequent contacts with nonsupportive, indifferent others can go only so far in promoting general wellbeing and does little to satisfy NTB. In other words, NTB requires the perception of an ongoing, interactive, long-lasting relationship and bond, and the belief that the significant other cares about the individual's welfare while showing affection. Baumeister and Leary (1995), for example, noted that while bond formation is the initial step that provides positive affect, NTB is fully satisfied and provides higher levels of joy when the bond is formalized into a more recognizably permanent status such as marriage. Individuals seem to be sensitive to the other's attitudes within a relationship and are opposed to dissolving the relationship.

With reference to attachment theory (Bowlby, 1969), Baumeister and Leary (1995) stated that even children as young as one year old experience extreme distress—separation anxiety—when separated from their mothers, and adults experience similar reactions when forced to leave loved ones for an extended period of time. The authors went one step further, drawing attention to cases in which individuals seem reluctant to dissolve even bad or destructive relationships. They regarded unwillingness to leave an abusive intimate partner as demonstrating the strength of NTB and reluctance to break social bonds. However, it is important to note once again that even if an individual has both an enduring bond and frequent interactions, NTB is not perceived as being fully satisfied if permanent care and mutuality are lacking. In this sense, a significant relationship needs to provide the perception of longevity, mutual affectionate concern, as well as care and continuous interaction in order to satisfy NTB. In this respect, we believe that a potential partner who is assumed to hold benevolently sexist attitudes may fulfil the requirements for the satisfaction of NTB.

Leary et al. (2013) argued that individuals differ in terms of the strength of their desire to belong and that individuals who score high in terms of NTB regularly worry about acceptance and belonging compared to others who are low in NTB. The authors developed a scale to measure NTB as an individual difference and they used their work, which combined nine studies, to provide evidence that this scale includes both the positive aspects (e.g., motivation and behaviors that foster positive relations with others) and the negative aspects (e.g., difficulty in meeting relational needs)

of NTB. In general, they found that NTB has positive associations with the need for affiliation, sociability, agreeableness, and the degree to which individuals value secure and satisfying interpersonal relationships. However, NTB also showed positive associations with neuroticism, anxious attachment, depression (in only one sample), fear of criticism and rejection, social isolation, shyness, a propensity for hurt feelings, and dependent, avoidant, and borderline personality disorders.

Leary et al. (2013) also found that high NTB is related with greater fear of rejection, which is a strong indicator of attachment anxiety (Study 1; 5). In study 5, the authors tested the discriminant validity of NTB through simultaneous regression analyses and found that NTB had a different pattern of associations with loneliness, need for affiliation, rejection sensitivity, depression, and low self-esteem than with attachment anxiety and avoidance. Although NTB resembles attachment anxiety, it was not related with feelings of loneliness and low self-esteem, as was attachment anxiety, whereas attachment anxiety was not related with need for affiliation. However, high NTB, similar to attachment anxiety (Mikulincer & Shaver, 2016), was associated with greater sensitivity to interpersonal cues as well as more accurate interpretations of other people's emotions from their tone of voice and facial cues, because people who desire social acceptance pay attention to information that will help them foster connections with others (Pickett et al., 2004). Baumeister and Leary (1995) noted that their belongingness hypothesis differs from Bowlby's attachment work (1969), because these authors' version of the belongingness hypothesis does not regard the need for belonging as derived from a particular relationship (i.e., child-caregiver relationship as the core for any relationship formed during adulthood within attachment theory) or focused on a particular individual (e.g., mother). What is more, Chen et al. (2015) mentioned the importance of positive other model as a strong motivation that underlies need for belongingness which might include not only people with high attachment anxiety levels but also individuals with high attachment security levels. That is, an individual high in NTB does not necessarily need to have high attachment anxiety levels.

Allen et al. (2021) suggested social competencies as necessary for the emergence of belonging. The authors defined these competencies as the set of skills that are crucial for connecting and experiencing belonging with others. These skills may assist individuals to cope effectively should feelings of not belonging arise (Frydenberg et al., 2009). They may also help

individuals to use socially appropriate behaviors to increase opportunities to satisfy NTB (Blackhart et al., 2015). The ability to regulate emotions, for example, may reduce the likelihood of social rejection or ostracization from others (Mao et al., 2018). Being high in attachment anxiety interferes with emotion regulation, especially in the context of intimate relationships. Individuals high in attachment anxiety tend to use hyperactivation strategies (i.e., excessive attempts to gain proximity) to keep a partner close, which are likely to elicit distancing attempts by the partner in response to what they perceive as clinging behavior (Gillath et al., 2016).

Perceptions related to the experience of belonging also play an important role in NTB. An individual may appear to have all the means to satisfy NTB but may still be dissatisfied due to their perceptions of the relationship, self, and others (Allen et al., 2021; Walton & Brady, 2017). With respect to IWMs that stem from attachment anxiety, it may be the case that negative perceptions of the self and negative expectations of relationships leave individuals who are high in attachment anxiety with perceptions of interpersonal relationships that do not fulfil their NTB. Indeed, these individuals underestimate the love and support they receive from their partners (Collins & Feeney, 2004), feel less secure and calmed by responsive partner behavior (Simpson et al., 2007), and doubt that committed partners will remain devoted and invested in the future (Collins et al., 2006). In this sense, we believe that even though attachment anxiety, unlike attachment avoidance, motivates individuals to form relationships, besides individuals who have high levels of NTB, individuals who are high in attachment anxiety may also find it harder to satisfy NTB, since these latter individuals lack the competency to regulate their emotions and use socially appropriate skills, nor do they perceive belonging as satisfying, since they underestimate the care and support they are shown by others.

Thus, there is existing indirect evidence to indicate that women with higher levels of attachment anxiety may have higher NTB levels and, in turn, that both may drive them to idealize a partner who is assumed to hold benevolent sexist attitudes. To the best of our knowledge, the present studies are the first to investigate attachment anxiety (as well as the effect of activation of attachment security schema in Study 2) and preference for benevolent sexist attitudes in potential romantic partners with reference to NTB. We worked with attachment security activation in Study 2 because there is robust evidence that shows the positive effect of secure base schema activation on individuals' well-being via enhancing mental representations (i.e., IWMs) (Mikulincer &

Shaver, 2015). These mental representations of attachment security lead to effective coping skills, mutually satisfying social interactions, high self-esteem, and emotional stability. That is, security priming has positive effects on appraisals of self and others which might interfere with excessive need for relationship security as well as ideal future partner preferences among individuals high in attachment anxiety. In this sense the suggested preference for an ideal partner that holds BS attitudes might decrease.

4.2 Study 1

In our two studies, we handled NTB as a trait (i.e., we took belonging to be a core psychological need; Allen et al., 2021). Although NTB is a fundamental need, there are individual differences regarding the strength of this need. Individuals high in NTB tend to worry about how they are valued by others. They fixate on interpersonal relationships and put a great deal of effort into sustaining them (Leary et al., 2013). This resembles the hyperactivation strategies in which individuals who are high in attachment anxiety automatically engage. High NTB scores may also be associated with anxiety-ridden dependency on other women or excessive sensitivity to rejection. Assuming that this is the case, it follows that women who are high in NTB may also be high in attachment anxiety and, as a result, are more likely to look for a potential partner who holds benevolent sexist attitudes compared to individuals with low NTB. Moreover, a partner of this kind is likely to have a disproportionate effect on individuals with high NTB as well as high attachment anxiety in terms of fulfilling their NTB and relationship security needs, since BS guarantees long-term devotion and investment in the relationship. These features are perceived as stronger aspects of relationship security and continuity compared to the full commitment of the partners. The present study examined whether this is the case. We expected women who are high in attachment anxiety to have higher levels of NTB and a stronger preference for an ideal partner with benevolent sexist attitudes. Specifically, attachment anxiety levels were expected to moderate the relationship between NTB and preference for BS in an ideal partner. In other words, we expected NTB and a preference for an ideal partner who endorses BS to be associated more strongly with higher levels of attachment anxiety.

4.2.1. Materials and method

4.2.1.1. Participants and procedure

Taking into consideration that we wanted to use multiple regression analysis with three variables, inputting a small to medium interaction effect size (ηp2 = 0.035) into G*Power determined a sample size of 132 at 95 % power (Gravetter & Wallnau, 2007). A total of 224 Hungarian females (*M*age = 37.88, *SD*age = 12.43, range 20–80) participated in Study 1. The participants first read the research participation manual and completed the questionnaire only if they agreed to participate.

We designed the study using Qualtrics questionnaire design software and advertised it on various Facebook pages as a study on "preferences in a potential romantic partner." Participation was voluntary. Ethical approval was obtained from the researchers' university. The participants were presented with scales to measure attachment orientation, NTB, and BS in an ideal partner. The ideal partner BS scale required participants to rate the benevolent sexist attitudes that they wished their potential future partner to hold. The questionnaire took 10 to 20 min to complete.

4.2.1.2. Measures

4.2.1.2.1. Adult attachment orientations

Adult attachment was assessed using the Experiences in Close Relationships–Revised questionnaire (ECR-R; Fraley et al., 2000). The ECR-R is a 36-item self-report measure of adult attachment. The scale consists of two 18-item subscales that represent the two orthogonal dimensions of the attachment construct: attachment-related anxiety (α = 0.93) and attachment-related avoidance (α = 0.91). Participants were instructed to indicate how they generally experience relationships using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), with higher scores reflecting greater endorsement of the construct. An example of an item representing anxiety was "I worry a lot about my relationships," while an example of an item representing avoidance was "I don't feel comfortable opening up to others."

4.2.1.2.2. Ideal partner BS

The short-form version of the Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996) was adapted for measuring ideal partner BS. Participants were asked to rate the items as follows:

"Please indicate to what extent you would like your future partner to hold the following opinions." Six items assessed the endorsement of BS (e.g., "Women should be cherished and protected by men": 1 = strongly disagree, 5 = strongly agree; α = 0.78).

4.2.1.2.3. Need to belong

A 10-item measure was used to assess motivation to be accepted by others and avoid being shunned (Leary et al., 2013). Participants were instructed to indicate how they generally experience relationships using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores reflecting greater endorsement of NTB. An example of an item used in the NTB scale is "My feelings are easily hurt when I feel that others do not accept me" (α = 0.82).

4.2.2. Statistical analyses

To create a score for each attachment orientation, the NTB and ideal partner BS items were added and divided by the number of items. Subsequently, in order to investigate the moderating effect of attachment orientations on the associations between NTB and ideal partner BS, multiple regression analyses were conducted, including the interaction terms between attachment orientations (anxiety and avoidance) and NTB. All statistical analyses were performed using the SPSS software program (version 26) and model 4 in PROCESS (Preacher & Hayes, 2004).

4.2.3. Results and discussion

4.2.3.1. Descriptive statistics and correlation analyses

The descriptive statistics and correlations of all measures are presented in Supplementary Table S1. Attachment anxiety was positively and moderately correlated with ideal partner BS (r = 0.42, 95 % CI = [0.30, 0.53]) and NTB (r = 0.42, 95 % CI = [0.29, 0.52]). Attachment avoidance was positively correlated with ideal partner BS (r = 0.25, 95 % CI = [0.11, 0.37]) while NTB was positively correlated with ideal partner BS (r = 0.27, 95 % CI = [0.14, 0.39]). Attachment avoidance did not show significant correlation with NTB (r = 0.10, 95 % CI = [−0.04, 0.24]).

4.2.3.2. Moderating effect of attachment anxiety on the association between NTB and ideal partner BS

To examine whether attachment anxiety moderates the association between NTB and ideal partner BS, we used moderated multiple regression analyses. The detailed results are presented in

Table 1. In the non-adjusted model (Model 1), attachment anxiety and NTB were positively associated with ideal partner BS, while attachment avoidance was not significantly associated with ideal partner BS. In addition, the interaction term between NTB and attachment anxiety was statistically significant. After entering the confounding variables (age and education for Model 2), these associations remained consistently significant. In the fully adjusted model (Model 2), main effects were observed for NTB (*B* = 0.19, *B SE* = 0.08, 95 % CI = [0.01, 0.20], *p* = .024), attachment anxiety (*B* = 0.20, *B SE* = 0.05, 95 % CI = [0.09, 0.31], *p* < .001) but not for attachment avoidance (*B* = 0.06, *B SE* = 0.05, 95 % CI = [−0.04, 0.17], *p* = .262). In addition, the interaction term of NTB and attachment anxiety was significantly related to ideal partner BS (*B* = 0.11, B *SE* = 0.05, 95 % CI = [0.01, 0.20], *p* = .024). This interaction suggested that the effects of NTB on ideal partner BS were moderated by the level of attachment anxiety.

Table 1.

Results of multiple regression analyses

	Model 1[a]				Model 2[b]			
Independent Variables	B	B SE	95%Cl	p	B	B SE	95%Cl	p
Attachment anxiety	**0.23**	**0.05**	**[0.19, .0.34]**	**< .001**	**0.20**	**0.05**	**[0.09, 0.31]**	**< .001**
Attachment avoidance	0.05	0.05	[-0.05, .0.16]	.318	0.06	0.05	[-0.04, 0.17]	.262
NTB	**0.20**	**0.08**	**[0.03, 0.36]**	**.019**	**0.19**	**0.08**	**[0.03, 0.36]**	**.019**
Attachment anxiety X NTB	**0.09**	**0.04**	**[0.01, .0.19]**	**.044**	**0.11**	**0.05**	**[0.01, 0.20]**	**.024**

Notes. NTB = Need to belong
The partial regression coefficients which are significant at p<.05 level are in boldface.
[a] Non-adjusted.
[b]Adjusted for age and education.

To further explore this interaction effect, a simple slope analysis was conducted. The estimated slopes are visually presented in Fig. 1. High attachment anxiety was represented by 1 SD above the mean and low attachment anxiety by 1 SD below the mean. The association of NTB with ideal partner BS was significant and positive among individuals with high attachment anxiety ($B = 0.32$, $B\ SE = 0.10$, 95 % CI = [0.12, 0.53], $p = .001$) and individuals with moderate attachment anxiety ($B = 0.18$, $B\ SE = 0.08$, 95 % CI = [0.01, 0.34], $p = .028$). By contrast, the association was not statistically significant among those with low attachment anxiety ($B = 0.03$, $B\ SE = 0.10$, 95 % CI = [−0.17, 0.24], $p = .74$). In the present study, the Johnson-Neyman technique was also used to determine regions of significance. The results indicated that higher levels of NTB were significantly associated with higher levels of ideal partner BS in individuals whose standardized attachment anxiety score was higher than −0.17. Unstandardized attachment anxiety scores ranged from −1.89 to 4.04—that is, the NTB and ideal partner BS association was strongest among individuals high in attachment anxiety. Specifically, an individual's NTB seems to be important in terms of their tendency to prefer a partner who holds more benevolent sexist attitudes if they have a greater fear of abandonment.

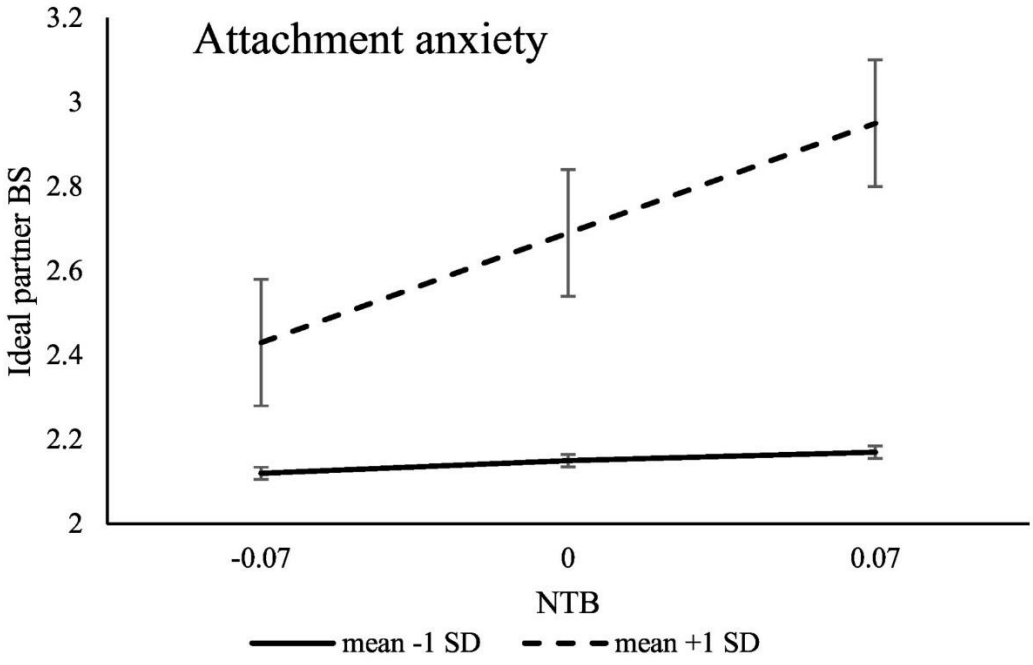

Figure 1. Moderation analyses for attachment anxiety.

Note. Simple slopes describing ideal partner BS are predicted by the two-way interaction between NTB and attachment anxiety. Standard errors are included.

4.3. Study 2

Although the results were in line with our assumptions, Study 1 was not without limitations. The main limitation was the correlational design of the study, which does not allow for the assessment of causality. The aim of Study 2 was to investigate whether the findings from Study 1 would be reinforced by an experimental design. The association between attachment insecurity, NTB, and ideal partner BS in Study 1 suggested a link between attachment security enhancement and NTB as well as ideal partner BS. Indirect evidence suggests that enhancing attachment security may indeed serve as a technique to reduce fear of rejection. Researchers have demonstrated that security priming alters attachment anxiety, relationship expectations, views of the self, physiological reactions to perceived threats such as abandonment (Carnelley & Rowe, 2007; Gillath et al., 2022; Norman et al., 2015; Park, 2016), as well as emotion regulation (in line with the safe haven function of attachment; Gillath & Ai, 2021; Rowe et al., 2020).

In Study 1, we concluded that attachment anxiety contributes to NTB, which in turn increases the tendency to choose a partner who holds higher levels of benevolent sexist attitudes—that is, attachment anxiety seems to interfere with the way in which a potential partner is preferred. Study 2 addressed these findings by making the individual's feelings of being valued, belonged, cared for, loved, and secure in a relationship more explicit. We assessed ideal partner BS as well as NTB across a security primed (vs. neutral primed) group. We predicted that exposing women to attachment security priming, as compared to neutral priming, might result in an increased tendency to reject a potential partner who holds benevolent sexist attitudes. Additionally, we aimed to expand our finding that attachment anxiety appears to be the strongest predictor of preference for a partner who holds benevolent sexist attitudes due to altered NTB by comparing two conditions: attachment security priming and neutral priming.

4.3.1. Method

4.3.1.1. Participants and procedure

Taking into consideration that we intended to use an independent t-test to compare two conditions (secure vs. neutral), inputting a small to medium interaction effect size ($\eta p2 = 0.035$) into G*Power determined a sample size of 110 at 95 % power. Of the 535 females who participated via Qualtrics, 12 failed the attention check items, failed to complete the survey, or failed to complete the priming

tasks, leaving data from 523 participants for analysis (*M*age = 33.61, *SDage* = 10.73, range 18–71). Our inclusion criteria were being over 18 and being female. Among the participants, 78.2 % were university graduates, 4.6 % were high school graduates, and the rest were university students. Within the sample, 59.5 % of the participants were from Hungary and the rest were from Turkey.

The questionnaire was administered using Qualtrics questionnaire design software. Ethical approval was obtained from the relevant authority at the researchers' university. We advertised the study on various social media platforms as being related to visualization skills. Participation was voluntary. Participants were first presented with demographic questions. The attachment orientations questionnaire consisted of 7-point scales ranging from 1 (do not agree at all) to 7 (strongly agree), followed by a distractor task. Participants were then randomly assigned to one of two experimental conditions (security vs. neutral priming) in a between-subjects design. We then presented the NTB and ideal partner BS scales. It took 20 to 30 min to complete the whole survey.

4.3.1.2. Measurements

4.3.1.2.1. Attachment orientations

Participants completed the same attachment style scale as in Study 1 (for anxiety, α = 0.91; for avoidance, α = 0.90).

4.3.1.2.2. Distractor task

To prevent any biasing effect in the first set of the survey, we presented imaginary research that shifted attention away from relationships. The supposed research was about cats and how they imitate human behavior (*see* supplementary material). Participants then answered three open-ended questions (e.g., “How can we improve our research?”).

4.3.1.2.3. Priming conditions

Participants in the secure condition were asked to visualize and write about one of their relationships that made them feel secure. They were asked to spend 10 min visualizing the person and how they felt when with them (adapted from Bartz & Lydon, 2004). Participants in the neutral condition visualized and wrote for 10 min about their last visit to a supermarket (Mikulincer & Shaver, 2001). This was followed by open-ended questions such as “What was the name of the imagined store?” and “What were you shopping for?” (*see* supplementary material).

4.3.1.2.4. Felt security

To find out whether the experimental manipulation was successful, participants completed a 10-item measure (α = 0.94) of felt security (Luke et al., 2012). Participants rated the extent to which the person or scenario in the visualization task made them feel each item (i.e., comforted, secure, supported, safe, encouraged, sheltered, unthreatened, better about myself, loved, protected) on a 5-point Likert-type scale ranging from 1 (not at all) to 5 (very much).

4.3.1.2.5. Need to belong

Participants completed the same NTB scale as in Study 1 (α = 0.80).

4.3.1.2.6. Ideal partner BS

Participants completed the same ideal partner BS scale as in Study 1 (α = 0.82).

4.3.2. Results and discussion

4.3.2.1. Felt security

As a manipulation check, we examined whether post-prime felt security was higher for people in the secure prime condition compared with the neutral prime condition. We conducted an independent t-test analysis with prime condition (two levels: secure and neutral) as the independent variable and post-prime felt security as the dependent variable. Levene's test indicated equal variances across experimental groups (p = .46). The effect of condition on felt security was significant, $t(523) = 11.816$, $p < .001$. Participants in the secure condition (M = 4.22, SD = 0.93) reported significantly higher felt security than those in the neutral condition (M = 3.04, SD = 1.07). Fig. 2 shows that participants in the secure prime condition reported higher felt security than participants in the neutral prime condition, indicating the success of the priming manipulation.

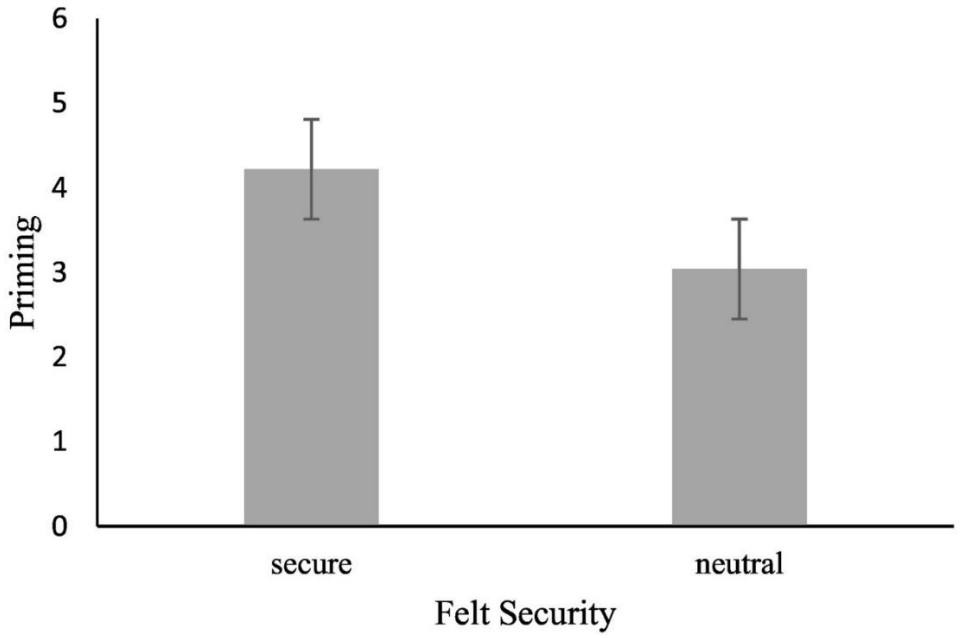

Figure. 2. Estimated marginal means for felt security in each experimental condition in Study 2.

3.2.2. Priming groups

Table 2 presents the means and standard deviations between the two independent priming groups. To ensure that our findings were not caused by baseline attachment scores, we conducted independent t-test analyses on attachment orientations. Neither of the attachment orientations—anxiety, $t(523) = -1.65$, $p = .099$; and avoidance, $t(523) = -0.20$, $p = .837$—differed significantly across the two manipulation conditions. Compared to the neutral condition, secure priming reduced reports of NTB and ideal partner BS, consistent with our expectations. Being reminded of secure schemas seems to reduce individuals' NTB as well as their preference for a potential partner who holds benevolent sexist attitudes toward women. Furthermore, when the two priming groups were compared, our findings indicated that the decrease in NTB and preferred ideal partner BS levels was not due to individual differences in attachment orientations. More specifically, attachment security priming had an overall effect regardless of attachment orientation due to felt security that is generated through mental representations of security schemas.

Table 2

Descriptive statistics and mean differences between two priming groups

	Security Prime			Neutral Prime			*t*	*p*
	M	*SD*	Range	*M*	*SD*	Range		
Attachment anxiety[a]	3.23	1.20	1.00-6.17	3.40	1.30	1.00-6.39	-1.65	0.099
Attachment Avoidance[a]	3.10	1.04	1.00-6.22	3.12	1.13	1.00-6.78	-0.20	0.837
NTB[b]	**2.93**	**0.81**	**1.00-4.90**	**3.10**	**0.82**	**1.40-4.90**	**-2.38**	**0.017**
Ideal Partner BS[b]	**2.31**	**0.95**	**1.00-4.67**	**2.53**	**0.99**	**1.00-5.00**	**-2.58**	**0.010**

Notes. [a]The theoretical range of scores are from 1 to 7; [b]The theoretical range of scores are from 1 to 5. The mean differences which are significant at $p < .05$ level are in boldface.

3.2.3. Correlation and mediation analysis

The NTB was positively correlated with ideal partner BS (r = 0.72, p < .001), and negatively correlated with ideal partner BS ($r = -0.05$, $p = .02$) whereas NTB was not correlated with felt security significantly ($r = -0.02$, $p = .55$). We conducted a hierarchical regression analysis to determine whether NTB mediated the relationship between security prime and ideal partner BS. Ideal partner BS was the criterion, with prime (Step 1) and NTB (Step 2) as predictors, overall $F(2, 418) = 240.19$, $p < .01$; cumulative $R^2 = 0.053$ (see Table 3). Prime significantly predicted ideal partner BS at Step 1, and when NTB was added to the equation (Step 2) the variation in ideal partner BS explained by the prime was reduced, indicating the likelihood of partial mediation.

Table 3.

Linear Regression analyses including all variables

	B (SE)		T		95% CI for B	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Priming (1= Secure, 0=neutral)	-.22* (.06)	-.18* (.08)	-2.58	-.2.16	[-0.38, -0.05]	[-0.34, -0.02]
NTB		.22** (.05)		4.27		[0.12, 0.32]
R^2	0.01	0.05				
F	6.66*	12.56**				

N= 523; **p<.001, *p<.05

We used bootstrapping (Preacher & Hayes, 2004) to test mediation model. The total effect of prime on ideal partner BS (β = −0.221, *SE* = 0.085; 95 % CI = −0.388, −0.052) and the direct effect of prime on ideal partner BS (*B* = −0.187, *SE* = 0.084; 95 % CI = −0.349, −0.016) were significant. Supporting the findings from regression analysis, the indirect effect of prime on ideal partner BS via NTB was significant (β = −0.038, *SE* = 0.019; 95 % CI = −0.081, −0.006), indicating that NTB partially mediates the relationship between prime and ideal partner BS. Priming attachment security (compared to a neutral prime) leads to decreased levels of NTB, which in turn reduces the preference for a future partner that holds benevolently sexist attitudes toward women (See Fig. 3).

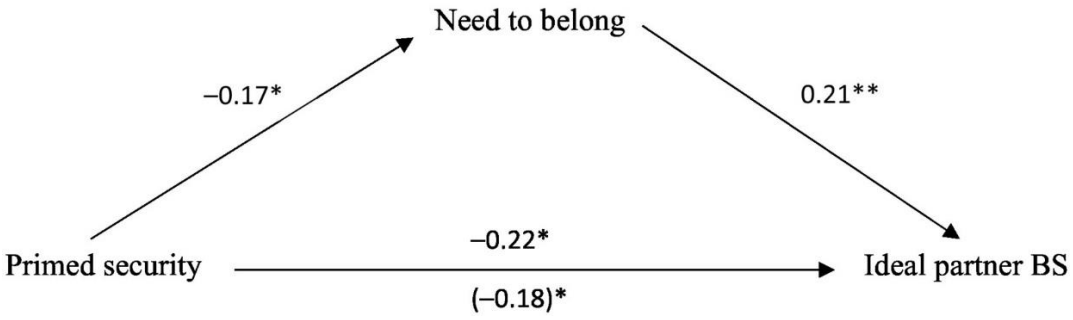

Fig. 3. Standardized coefficients demonstrating the mediating effect of NTB on the relationship between security prime and ideal partner BS.

Notes: The direct effect is presented within brackets; **p < .001, *p < .05.

4.4 General discussion

The aim of the research was to explore the relationships among attachment anxiety, NTB, and ideal partner BS. Two studies were conducted to examine and test these relationships. Both studies were conducted online and measured women's ideal partner attitudes (i.e., endorsement of benevolent sexist attitudes), attachment style, and NTB levels. Study 2 also used an attachment security priming task (vs. neutral priming) in an attempt to retrieve and activate security schemas and establish causality. We expected that women who have higher levels of NTB would prefer their potential partner to endorse higher levels of BS, and we expected this link to be stronger for women who are high in attachment anxiety (Study 1). Furthermore, we predicted that activating security schemas would induce felt security and reduce ideal partner BS by reducing NTB (Study 2). The results of Study 1 supported our expectations: Higher levels of NTB were positively

correlated with ideal partner BS, and this finding was strengthened by regression analyses, which indicated that NTB was a significant predictor of preference for a partner who endorses BS. The interaction term for attachment anxiety and NTB also showed that this relationship is stronger in the case of higher levels of attachment anxiety. The results of Study 2 also supported our hypotheses: Security priming induced felt security and attenuated ideal partner BS by reducing NTB.

We consider it important to understand the motivations behind the preference for partners who endorse benevolent sexist attitudes and to identify those who are more vulnerable to such attitudes bearing in mind the potential costs of BS for women. Our studies demonstrated that women who have an intense need for relationship security (women who are higher in attachment anxiety) and strong NTB were more likely to prefer their potential partner to hold benevolent sexist attitudes than were their counterparts with a more secure attachment orientation (see also Cross & Overall, 2018). The relationship between NTB and ideal partner BS was strongest in the case of higher levels of attachment anxiety. This finding provides evidence for the ways in which BS is thought to function by illustrating that it is the relationship security and relationship permanence promised to women by BS that underlies the appeal of BS to some women.

The findings are also important in that they address (1) attachment anxiety; (2) the need for security that underlies attachment anxiety as well as NTB, and (3) the need for the perception of the continuation of the relationship into the foreseeable future, both as core features of belongingness and central factors that promote greater vulnerability to the costs associated with BS. Furthermore, by demonstrating the positive association between attachment anxiety and the preference for a potential partner who holds benevolent sexist attitudes, we followed Cross and Overall's (2018) recommendation for replication with different samples. In their study, the authors also showed that the need for relationship security is the strongest predictor of preference for BS in an ideal partner.

Our study is one of the few to demonstrate a link between attachment orientations and NTB (see also Chen et al., 2015). The findings from Study 1 showed that individuals who are high in attachment anxiety also present high levels of NTB. With respect to the IWMs associated with attachment anxiety—mental representations of the self as negative and others as positive—individuals who are high in attachment anxiety regard others as the source for the fulfillment of

their intimacy needs, thus they may be motivated by strong NTB (e.g., Bartholomew & Horowitz, 1991). Furthermore, these individuals fixate excessively on the approval of others and on the permanence of relationships, which are also core features of belongingness. In this sense, individuals who are high in attachment anxiety may have an inordinate need to belong, to fit in, or to feel accepted (Bartholomew & Horowitz, 1991; Baumeister & Leary, 1995).

To the best of our knowledge, Study 2 is one of the first studies to examine the role of attachment security priming in NTB as well as in preference for benevolent sexist attitudes in potential partners. According to our findings, felt security following the activation of attachment security schemas seems to attenuate NTB, which in turn reduces preference for benevolent sexist attitudes in potential partners. Our results are in line with the assumption of the "broaden and build" cycle of attachment security (Fredrickson, 2001; Mikulincer & Shaver, 2020). According to this assumption, the enhanced sense of attachment security that results from actual or imagined interactions with sensitive and responsive attachment figures builds one's resilience and broadens one's perspectives and skills. In combination with our findings, we can assume that felt security attenuates both preoccupation with the need for relationship security and fear of abandonment and reduces the need for acceptance/approval, which in turn also reduces the importance attributed to permanent devotion and investment as preferred values in potential partners. Our findings also correspond to the statement made by Mikulincer and Shaver (2020) that "…both interactions with responsive attachment figures (at the interpersonal level) and the activated positive working models as well as secure-base script (at the intrapersonal level) contribute to one's emotional strength…" (p. 3). The activation of attachment schemas seems to allow people to divert their attention away from attachment-related worries and defenses to self-regulation resources. Indeed, recipients who feel that their relationship is a secure base experience the greater satisfaction and fulfillment of their relatedness needs and are able to shift their attention toward the pursuit of personal goals (Knee et al., 2013). We believe that helping women to develop and evoke secure attachment schemas—for example by means of psychological help or self-help groups—can empower and encourage them to prefer partners who have more egalitarian attitudes.

The present studies had many strengths. In terms of expanding the theory and outlook, the research linked ambivalent sexism, NTB, and attachment theory to examine the conditions under which women are more likely to prefer their potential partner to endorse benevolent sexist

attitudes. Previous research has shown that preoccupation with relationship security (i.e., attachment anxiety) is linked to traditional relationship scripts (i.e., BS; Fisher & Hammond, 2019; Hart et al., 2012). However, no previous studies had examined the relationship between NTB, attachment anxiety, and ideal partner BS. We investigated previously mentioned associations in both a cross-sectional and causal manner. The research also extends the well-established body of literature on brief manipulations of mental representations of attachment security in adults, with the aim of changing attachment-related outcomes (e.g., empathy, altruism, views of the self and others, exploration, concern for the self and others, and mood and mental health; for reviews see Mikulincer & Shaver, 2007). Furthermore, our data was from countries with a relatively low representation in the relevant fields.

Our studies were not without limitations. Firstly, the priming task in Study 2 was supraliminal and based on recall, while primes of this type risk external validity problems, since only those individuals who are able to recall a relevant relationship are included in the analyses (Sakaluk, 2014). Future studies might include individuals who are unable to recall any relevant memories and might check for differences with respect to the variables in question. Secondly, using imagined scenarios to prime attachment security may have introduced a level of variability in terms of the way in which participants accessed these representations (Selcuk et al., 2012). For example, higher attachment anxiety is associated with the poorer accessibility of positive memories (Mikulincer & Orbach, 1995). Future studies might control for the effect of attachment orientations on the vividness and accessibility of the requested memories/scenarios.

4.5. Conclusion

The present studies illustrate that a greater need for relationship security and belongingness orient women who are high in attachment anxiety to prefer partners who hold benevolent sexist attitudes, as these attitudes are perceived as offering relationship security in terms of the partner's reliability, investment, permanency, and devotion. Study 2 also showed that activating security schemas enhances felt security and attenuates NTB, which in turn reduces the preference for potential partners who endorse benevolent sexist attitudes.

Table S1

Descriptive Statistics and Correlational Coefficients

	Variables	*Mean*	*SD*	Range	1.	2.	3.	4.
1.	Attachment Anxiety[a]	2.89	1.34	1.00-6.94	-	.51** [.39, .61]	.42** [.30, .53]	.42** [.29, .52]
2.	Attachment Avoidance[a]	2.87	1.23	1.00-5.67		-	.25** [.11, .37]	.10 [-.04, .24]
3.	Ideal Partner BS[b]	2.47	0.97	1.00-5.00			-	.27** [.14, .39]
4.	Need to Belong[b]	3.06	0.76	1.00-5.00				-

Notes. 95%CIs for correlation coefficients are presented in parentheses.

[a]The theoretical range of scores are from 1 to 7.

[b]The theoretical range of scores are from 1 to 5.

5. The role of anxious attachment in the continuation of abusive relationships: The potential for strengthening a secure attachment schema as a tool of empowerment (Study 4)

Abstract

Remaining in an abusive relationship is a strong risk factor for (re)victimization. Due to the relational nature of intimate partner violence, attachment theory offers a useful framework for better understanding its dynamics. Within two studies we worked on individual differences regarding imagined attitudes when confronted with intimate partner violence as being the victim. Our first study showed that high level of attachment anxiety is a risk factor for willingness to remain when imagining a hypothetical abusive relationship incidence. The second study presented the effectiveness of security priming in reducing the willingness to remain when imagining being in an abusive relationship and showed that this effect was the strongest in the case of participants with higher levels of attachment anxiety. These findings extend our understanding of the dynamics behind remaining in an abusive relationship and suggest the use of attachment security schemas as an effective technique for inclusion in interventions against (re)victimization.

Keywords: Attachment; Attachment anxiety; Security priming; Empowerment; Intervention

5.1 Introduction

The Center for Disease Control and Prevention define intimate partner violence (IPV) as "physical violence, sexual violence, stalking and psychological aggression (including coercive tactics) by a current or former intimate partner (i.e., spouse, boyfriend/girlfriend, dating partner, or ongoing sexual partner)" (Breiding et al., 2015, p. 11). Intimate partner violence is one of the most important public health problems that affects mostly women around the world (World Health Organization, 2018). It is important to focus on the dynamics that lead IPV victims to stay with an abusive partner, because they are subject to physical as well as mental health consequences, including depression, generalized anxiety disorder, post-traumatic stress disorder, inability to work, unwanted pregnancies, miscarriages, and bruises (Anderson, 2008; Cavanaugh et al., 2012). Additionally, IPV is commonly repetitive and its severity as well as frequency tends to increase along with the duration of the relationship (Cochran et al., 2011). In this sense, staying with an abusive partner might increase the risk for (re) victimization and knowledge about the risk factors that contribute to women having repeated experiences of IPV is relatively scarce (Smith & Stover, 2016). To the best of our knowledge, no previous study has empirically tested an integrative model of the association between IPV and individual differences regarding attachment orientations. Considering the relational nature of IPV and drawing on adult attachment theory, our aim was to explore the underlying factors that contribute to the continuation of a relationship in the presence of IPV. Furthermore, we believe that fostering greater secure attachment patterns among (potential) victims can be combined with other interventions as an effective technique for preventing the recurrence of IPV.

Adult attachment theory is widely applied in this field of research, especially in terms of explaining individual differences (Barbaro et al., 2019). Building on Bowlby's attachment theory (1969), adult attachment theory proposes that internal working models (IWMs)—which provide us with expectations of ourselves or others and which are developed by interactions with caregivers—are carried into future relationships and regulate the functioning of adult relationships. Internal working models reflect the extent to which individuals believe themselves worthy of love and attention from others (the self-model) and the extent to which they believe that others will relate to them in a responsive and supportive way (the other model) (Henderson et al., 2005). In this sense, adult attachment theory highlights the importance of attachment experiences in early

development as a tool that strongly influences an individual's ability to establish interpersonal bonds later in life. There is therefore a risk that, as a result of insensitive and inconsistent caregiving, an individual will inherit inappropriate levels of both giving and receiving care, including overdependency or under-involvement behaviors. Ultimately, the quality of close relationships is due to these IWMs (Feeney, 2008) and IWMs are closely related with essential components of romantic relationships like conflict management and relational aggression (Riggs, 2010).

Research suggests that adult attachment can best be described according to two orthogonal dimensions— attachment avoidance and attachment anxiety with respect to the "deactivation" and "hyperactivation" of the attachment system (Brenner et al., 2021; Mikulincer & Shaver, 2016). Attachment avoidance is characterized by feelings of fear and discomfort with respect to intimacy, as well as high self-reliance and the refusal of dependency on others. Attachment anxiety, on the other hand, reflects a fear of rejection and abandonment, as well as a preoccupation with relationships and intimacy. Individuals that are placed low on the scale of both these dimensions fall into the secure attachment category, whereas others with high levels of anxiety or avoidance are categorized as being insecurely attached (Cassidy & Shaver, 2016).

Dutton and White (2012) explain how attachment theory plays a role in IPV. Studies have shown that many of the individuals who experience IPV demonstrate insecure attachment orientations (Ogilvie et al., 2014; Ponti & Tani, 2019), and these orientations predict both the perpetration of IPV and IPV victimization (Bélanger et al., 2015). For example, compared to their counterparts, individuals high in attachment anxiety are at higher risk of IPV perpetration. Because of their disturbed affect regulation and cognition, they use IPV as a tool to provide proximity when their fear of loss is activated (Barbaro et al., 2019). Individuals high in attachment avoidance, on the other hand, might deliberately use aggressive behaviors or other abusive strategies to control and intimidate their partners, and to prevent them from providing proximity (Gormley & Lopez, 2010).

Despite the extensive body of research on attachment and IPV perpetration, comparatively few studies have been carried out on victimization and attachment. Higher levels of attachment anxiety have been linked to recurrent IPV victimization among women, as it leaves women with a wide range of relational vulnerabilities (Velotti et al., 2018). As attachment anxiety predisposes

women to fear separation and abandonment, women high in attachment anxiety have difficulty leaving abusive relationships (Allison et al., 2008; Finkel & Slotter, 2007; Henderson et al., 2005; Shurman & Rodriguez, 2006). Doumas et al. (2008) stated that individuals high in attachment anxiety tend to tolerate violence as a tool to provide proximity—that is, negative treatment might seem more endurable by individuals high in attachment anxiety over perceived emotional distance, separation threats, or actual disengagement.

Furthermore, IPV may function as a tool of affirmation/validation for individuals with high attachment anxiety in terms of their perception of the self and of others. In their study on IPV, childhood maltreatment, attachment styles, and depressive symptoms among women, Smagur et al. (2018) reported that women interpret IPV in a way that is congruent with their negative working models of the self, and that IPV maintains working models that result from childhood maltreatment. From a different perspective, anxiously attached individuals' predominant IWM of the self as unworthy or undeserving of love may "justify" the abuse directed at them (Henderson et al., 2005). As Sandberg et al. (2016) stated, for individuals high in attachment anxiety, a caring and loving relationship might seem unattainable. In some cases, staying with an abusive partner might involve traumatic reenactment of unresolved attachment experiences (Pearlman and Courtois, 2005, van der Kolk, 1996).

5.1.1. Overview

The present research offers an empirical contribution to our knowledge of the links between attachment orientations and willingness to stay in an abusive relationship, which is a field that has been insufficiently studied to date. By means of two studies, we explored whether attachment anxiety is a risk factor for remaining in the abusive relationship. In the two studies, the term "abusive relationship" was defined as a relationship in which physical IPV is present, and willingness to stay in the relationship (WSR) is here synonymous with imagining oneself as the victim and imagining oneself supporting the continuation of the relationship despite IPV. What is more, the present study focused on females. Even though IPV rates did not differ among men and women (Straus, 2008), female victims were more likely to suffer more severe consequences (Caldwell et al., 2012; Nybergh et al., 2013; Stöckl et al., 2013), to be injured (Jasinski et al., 2014), and report more physical as well as emotional impairment (Askeland & Heir, 2013).

We are fully aware that a victim is not responsible for the victimization. Following Cattaneo and Goodman's (2005) suggestion, we believe it is important to investigate the risk factors because information about these factors may help practitioners guide (potential) victims in decision making and safety planning and inform the prevention of future IPV relationships. What is more, we also are aware that the variables included in the present study do not fully cover all the dynamics that contribute to the persistence on an abusive relationship (e.g., Capaldi et al., 2012; Pereira et al., 2020). Furthermore, we worked with a non-clinical sample (not with actual survivors of IPV) and based our research on participants' assumptions as discussed with the limitations in the end.

5.2. Study 1

Adopting methods used by earlier researchers (e.g., Bohner et al., 2010; Ramos et al., 2016), in Study 1 participants were asked to read about an IPV incident involving a fictional friend and they were informed about their friends' decision of leaving the partner. Attachment anxiety predisposes individuals to fear of interpersonal rejection or abandonment, distress, and excessive pursuit of the partner when one's partner is unavailable or unresponsive unlike the individuals high in attachment avoidance, who tend to withdraw from their partners under relationship stress (Cassidy & Shaver, 2016). Considering these patterns, we expect a tendency to stay in the relationship for individuals with greater attachment anxiety but not for attachment avoidance. Indeed, it has been hypothesized that high levels of attachment anxiety among victims of IPV may make it more difficult to leave an abusive relationship (Mikulincer & Shaver, 2016; Park, 2016). In Study 1, we therefore examined whether individuals with attachment difficulties are at increased risk for experiencing IPV by investigating the association between attachment orientations and keeping an abusive relationship.

5.2.1. Method

5.2.1.1. Participants

Taking into consideration that we wanted to use multiple regression analysis, inputting a small-to-medium interaction effect size ($\eta p2 = 0.035$) into G*Power determined a sample size of 132 at 95% power (Gravetter & Wallnau, 2007). We included only women who stated they were single, in order to avoid any effect of present relationship patterns, and older than 18. Participants included 150 females (*M*age = 38.59 years, *SD*age = 12.77 years). Among these participants, 78% were

university graduates, whereas 8.7% were high school graduates, 4.7% were university students,8.7% was other. Within the sample, 84% were Turkish, 16% were Hungarian.

5.2.2. Procedure

We designed the study using Qualtrics questionnaire design software, and we advertised it on various Facebook pages as a study on "the preferences for a potential romantic partner." Participation was voluntary. Ethical approval was provided by Eötvös Lorand University. Participants were first presented with an attachment style questionnaire. Then a scenario (incident) was presented, in which an imaginary close friend was being physically abused by her partner and participants were informed of their friend's decision to leave her partner. Finally, they were provided with willingness to stay in relationship questionnaire. The last questionnaire required answers as if the participants were the victimized close friend. The survey took 10 to 20 min to complete.

5.2.2.1. Measurements

5.2.2.1.1. Attachment styles

We used the Experiences in Close Relationships–Revised (ECR-R) scale (Fraley et al., 2000). This 36-item scale comprises 18 attachment anxiety items (e.g., "I'm afraid that I will lose my partner's love"; $\alpha = 0.94$) and 18 attachment avoidance items ("I get uncomfortable when a romantic partner wants to be very close"; $\alpha = 0.95$). Items are scored on a 7-point scale, where higher scores indicate a higher level of anxious and avoidant attachment (1 = strongly disagree, 7 = strongly agree). Low scores on both subscales indicate secure attachment.

5.2.2.1.2. Scenario

All participants were presented with this scenario; "Imagine that you have a close friend named Mary. One day, when you are spending time together, she confides in you that her partner, Jacob, lost control of his anger during a recent disagreement. Jacob became so angry that he beat Mary. This is not the first time that Mary has confided in you about Jacob's anger and violent behavior; in fact, Mary has discussed with you a similar situation several times in the past. After what happened, Mary told you that she has decided to break up with him."

5.2.2.1.3. Willingness to stay in the relationship

The assessment scale was developed for the present study. Six items were used to assess how participants would react to the incident if they were the victimized close friend (i.e., Mary) —that is, the extent of their willingness to stay in the relationship (e.g., "If I were her, I'd give him another chance;" $\alpha = 0.79$). A principal component analysis with a varimax rotation was conducted on the 6 items with the present data and a one-factor solution (based on eigenvalues >1) was yielded. All items accounted for 48% of the variance and they all loaded at 0.50 or higher on the factor (see Tables S1 and S2).

5.2.3. Results and discussion

Table 1 presents bivariate correlations, means, and standard deviations. Recall that the participants answered questions on the WSR as if they were the victim and questions on the ECR about their own attitudes in relationship. In order to determine the association between WSR and attachment orientations, we conducted bivariate correlational analyses. Our findings were in line with our expectations that attachment anxiety and avoidance were positively related with WSR. Indeed, as attachment anxiety or avoidance increased so did participants' imagined willingness to stay in the relationship.

Table 1

Study 1: Means, Standard Deviations and Correlations for All Variables

		Mean	*SD*	1	2	3
1.	Attachment anxiety	2.97	1.40	-	.47**	.35**
2.	Attachment avoidance	2.94	1.24		-	.22**
3.	WSR	1.71	0.79			-

Note. $N = 150$; WSR: Willingness to stay in the relationship. **$p < .001$.

2.3.1. Willingness to stay in the relationship

We determined the predictive value of each independent variable on willingness to stay in the relationship using hierarchical regression analysis (see Table 2). The overall regression model was significant, F (6, 144) = 0.68, $p < .001$, $R^2 = 0.21$; indicating that the predictors taken together accounted for 21% of the variance in WSR. Attachment anxiety positively and significantly predicted WSR, whereas attachment avoidance did not. Attachment anxiety presented the strongest

predictive value for WSR. That is, individuals high in attachment anxiety had the strongest tendency to imagine themselves staying in the relationship.

Table 2

Study 1: Hierarchical Multiple Linear Regression Analysis for WSR

Variables	WSR			
			95% CI	
	Step 1(β)	Step 2 (β)	Step 1	Step 2
Age	0.01	0.11	[-0.01, 0.01]	[-0.01, 0.01]
Education	0.05	-0.17*	[-0.21, 0.01]	[-0.21, -0.01]
Attachment anxiety		0.34**		[0.09, 0.29]
Attachment avoidance		0.06		[-0.07, 0.15]
F	1.79	6.73**		
R^2	0.02	0.15		
ΔR^2		0.13		

Note. N = 150; β: Standardized coefficients, WSR: Willingness to stay in the relationship, CI : Confidence Interval.

Our findings of Study 1 were consistent with Cross and Overall's (2018) results which indicated that individuals with high attachment anxiety have a greater tendency to imagine themselves staying in the relationship. Despite the presence of IPV, anxiously attached women imagined staying in the relationship more than avoidantly attached women. Negative views of self, a fixation on separation anxiety, and the excessive need for relationship security that comes with attachment anxiety seem to interfere with IPV perception and tend to result in the imagined continuation of the abusive relationship. On the other hand, IPV may work as a tool for maintaining contact, which is preferred over detachment/break-up that represents a strong threat of separation among individuals with high attachment anxiety (see Velotti et al., 2018). The null finding regarding attachment avoidance and imagined willingness to keep the relationship is complementary with regards to IWMs individuals with high levels of attachment avoidance have. These individuals have a negative view for others as well as repressed relationship needs. Thus, because avoidant individuals show excessive self-reliance and a tendency to withdraw from relationships under relationship stress (Mikulincer & Shaver, 2011), the WSR items might be irrelevant for them.

5.3. Study 2

The main limitation of Study 1 was its correlational design, which does not allow for the assessment of causality. Study 2 aimed to investigate whether the findings from Study 1 would be reinforced by an experimental design. The association between attachment insecurity and willingness to stay in the abusive relationship in Study 1 suggested a link between attachment security enhancement and leaving the abusive relationship. Indirect evidence (i.e., more positive views of the self and less attachment anxiety, Carnelley & Rowe, 2007) suggests that enhancing attachment security may indeed serve as a technique to enhance the rejection of an abusive relationship. Researchers have demonstrated that security priming alters attachment anxiety, relationship expectations, and views of the self, as well as physiological reactions to perceived threats (Carnelley & Rowe, 2007; Norman et al., 2015; see also Park, 2016). Specifically, we aimed to expand our finding that attachment anxiety appears to be the strongest predictor for staying in an abusive relationship by comparing two conditions: attachment security priming and neutral priming.

Building on the conclusion drawn by Park (2016) that having skills to maintain secure and supportive relationships would make women less likely to remain in an abusive relationship, in our second study we investigated whether shifting attention to times when attachment needs were met might support this recommendation. Attachment security priming (also known as secure base priming or security priming) involves the clinical or experimental activation or inducement of a secure attachment style using various explicit or implicit methods, including guided visualizations, recall, and the presentation of visual stimuli (Mikulincer & Shaver, 2015; Norman et al., 2015). Accordingly, Roisman et al. (2002) concluded that “earned secure” individuals perform as well as “secure” (i.e., those who are secure from infancy). Also, these authors mentioned that “earned secure” individuals are not only able to overcome their childhood negative experiences, but in applied contexts (relationship break-ups, parenting of their own kids) they perform as well as their “secure” counterparts. Research has shown that attachment security priming has direct and indirect positive impacts. Indeed, Norman et al. (2015) found that attachment security priming modulates the threat-related amygdala reactivity that enhances anxiously attached individuals' fixation on the threat of separation. Accordingly, security priming has been shown to increase attachment security (Lin et al., 2013), which is associated with balanced self-representation (e.g., Psouni et al., 2015),

engagement in constructive coping (Psouni & Apetroaia, 2014), self-compassion, and resilience (Oehler & Psouni, 2019).

Corvo et al. (2018) proposed attachment security priming as a possible and effective intervention technique for IPV. Altering IWMs that are negatively predisposed towards the self may enable actual or prospective victims to obtain the skills required to meet attachment needs in ways that are not at the cost of their well-being. Considering the extent to which attachment anxiety, fear of abandonment, and negative evaluations of the self can be attenuated by shifting attention to moments when attachment needs were fulfilled—that is, by evoking attachment security schemas—it may be possible to empower victims.

The findings from Study 1 suggested that attachment anxiety might contribute to hesitancy in terms of rejecting an abusive relationship—that is, attachment anxiety seems to interfere with the way in which an abusive partner is perceived. Study 2 addressed these findings by making the individuals' feelings of being valued, cared for, loved, and secure in a relationship more explicit. We assessed willingness to stay in an abusive relationship across the two different priming conditions (security or neutral). We predicted that exposing individuals to attachment security priming, as compared to neutral priming would result in an increased tendency to reject an abusive partner. We believe that helping women to develop and evoke secure attachment schemas—for example by means of psychological help or self-help groups—can encourage them to reject an abusive relationship by empowering them. Drawing on indirect evidence (i.e., more positive views of the self and less attachment anxiety, Carnelley & Rowe, 2007), we argue that evoking secure schemas using various priming methods can be a powerful and effective technique for inclusion in IPV interventions.

5.3.1. Method

5.3.1.1. Participants

Taking into consideration that we would use independent-samples t-tests to compare two conditions (secure vs. neutral), inputting a small-to-medium interaction effect size ($\eta p^2 = 0.035$) into G*Power determined a sample size of 110 at 95% power. Participants included 230 females (*M*age = 28.77, *SD*age = 9.44, range 18–63). Among these participants, 62.1% were university

graduates and the rest were university students. Within the sample, 67% of participants were from Hungary, 14% from Turkey, the rest from Poland, Romania, and Serbia.

5.3.1.2. Design and procedure

The questionnaire was administered using Qualtrics questionnaire design software. Ethical approval was given by the relevant authority at the Eötvös Loránd University. We advertised the study on various social media platforms as being related to visualization skills. Participation was voluntary. Participants were first presented with the same demographic questions and the attachment orientations questionnaire from Study 1. Following the 5 min distractor task, participants were randomly assigned to one of two experimental conditions (security vs. neutral priming) in a between-subjects design. We then presented the scenario used in Study 1 and participants completed the Willingness to Stay Questionnaire. It took 20 to 30 min to complete the whole survey.

5.3.1.3. Measurements

3.1.3.1. Attachment style

Participants completed the same attachment style scale as in Study 1 (for anxiety, $\alpha = 0.92$; for avoidance, $\alpha = 0.89$).

5.3.1.3.2. Distractor task

To prevent any biasing effect in the first set of the survey, we presented imaginary research that shifted attention away from relationships. The supposed research was about cats and how they imitate human behavior (see Supplementary Material). Participants then answered three open-ended questions (e.g., “How can we improve our research?”)

5.3.1.3.3. Priming conditions

Participants in the secure condition were asked to visualize and write about one of their secure relationships for 10 min (adapted from Bartz & Lydon, 2004, see Supplementary Material) and how they feel when with her or him. Participants in the neutral condition visualized and wrote for 10 min about their last visit to a supermarket (Mikulincer & Shaver, 2001), which was followed by open-ended questions: e.g., “What was the name of the imagined store?” and “What were you shopping for?”

5.3.1.3.4. Willingness to stay in the relationship

Participants completed the same WSR scale as in Study 1 (α = 0.73).

5.3.2. Results

Table 3 presents bivariate correlations, means, and standard deviations. Again, recall that the WSR was answered as if the participants were the victim and the ECR was completed reflecting on participants' own attitudes in relationship. To ensure that our findings were not caused by baseline attachment scores, we conducted independent t-test analyses on attachment orientations. None of the attachment orientations differed significantly across the two manipulation conditions, anxiety $t(229) = -0.15$, $p = .879$; avoidance $t(229) = -1.31$, $p = .191$. In order to determine the associations between attachment orientations and WSR, we conducted bivariate correlational analyses. As in the Study 1, attachment anxiety and attachment avoidance were positively related with WSR, such that individuals who are high in attachment anxiety or avoidance imagined staying in the relationship more than those who were low.

Table 3

Study 2: Means, Standard Deviations and Correlations for All Variables

		Mean	*SD*	1	2	3
1.	Attachment anxiety	2.96	1.15	-	.48**	.13*
2.	Attachment avoidance	2.69	0.93		-	.16*
3.	WSR	1.34	0.51			-

Note. $N = 230$; WSR: Willingness to stay in the relationship. *$p < .05$, **$p < .001$.

Furthermore, and as expected, participants in the secure priming condition (n = 96) reported lower levels of willingness to stay in the relationship compared to participants in the neutral condition (see Fig. 1). The independent t-test results showed the aforementioned difference between the two conditions to be statistically significant, $t(229) = -2.02$, $p = .045$.

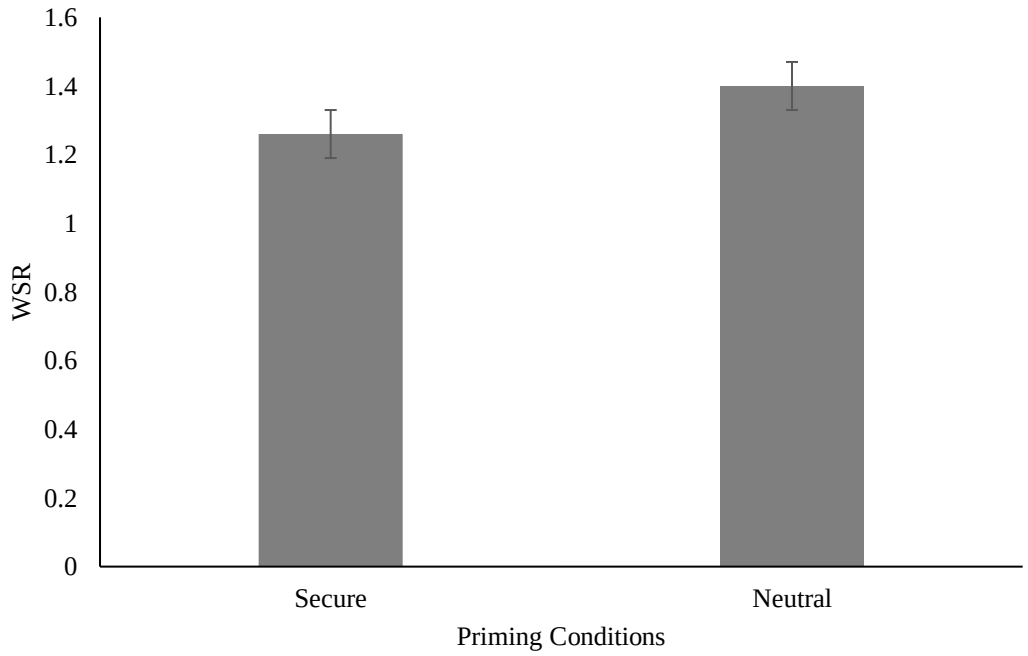

Figure. 1. Study 2: The WSR levels for priming conditions.

Note. Error bars represent standard errors of the means.

5.3.2.1. Moderating role of attachment orientations

We also tested for several moderation models using the bootstrapping PROCESS approach of Hayes (2013; Model 1) to examine whether attachment orientation moderates the association between security priming and WSR. We found that attachment anxiety significantly moderated the association between attachment security priming and WSR. Both the whole model, R^2 = 0.06, F (3, 226) = 5.19, p = .001, and the interaction, B= −0.16, t = −2.65, p = .008, 95% CI [−0.27, −0.04], were found to be statistically significant. For highly and moderately anxiously attached women, WSR scores were related to security priming at high attachment anxiety and moderate attachment anxiety levels: B = −0.32, t(228) = −3.32, p = .001, 95% CI [−0.51, −0.12]; B = −0.13, t(228) = −2.04, p = .041, 95% CI [−0.27, −0.01] respectively. However, when participants had lower attachment anxiety scores, WSR and security priming were not significantly associated, B = 0.04, t(228) = 0.44, p = .658, 95% CI [−0.14, 0.23] (*see* Fig. 2). Attachment avoidance, on the other hand, did not moderate the above mentioned association, B = −0.11, t = −1.55, p = .128, 95% CI [−0.25, 0.03] (*see* Fig. 3).

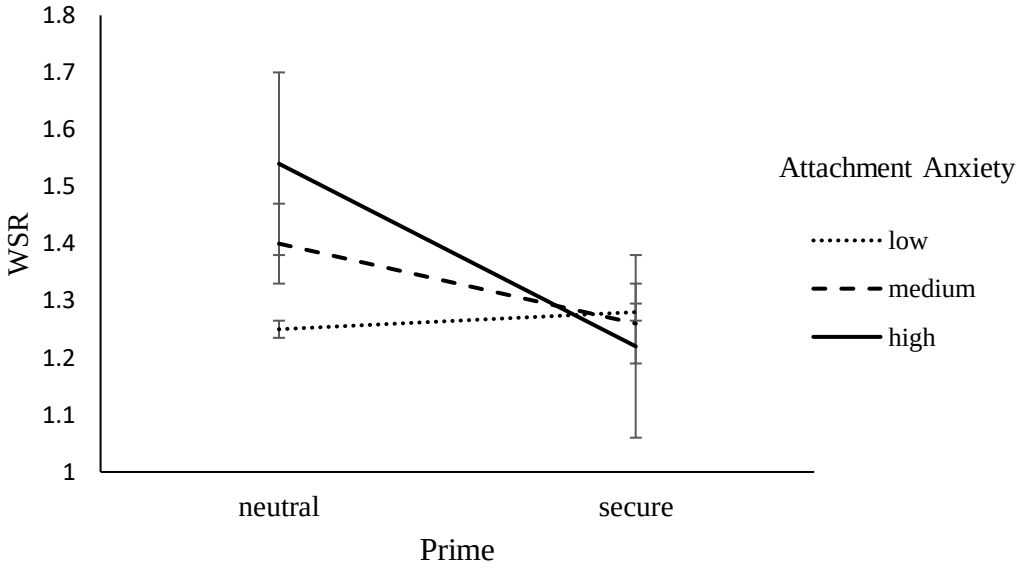

Fig. 2. Study 2: effect of attachment anxiety (±1 SD) on WSR for neutral and secure conditions.

Note. Error bars represent standard error of the means.

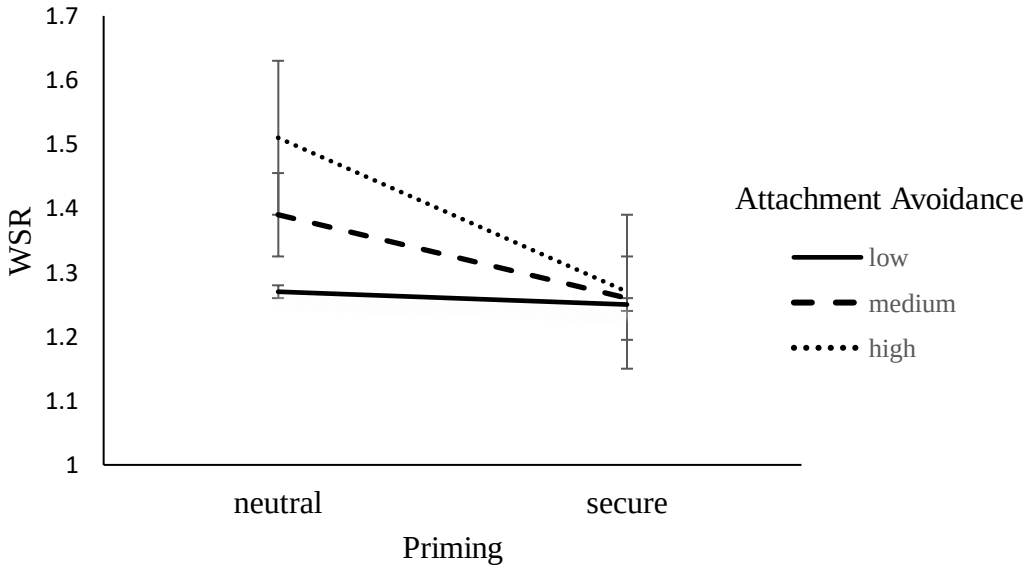

Fig. 3. Study 2: effect of attachment avoidance (±1 SD) on WSR for neutral and secure conditions.

Note. Error bars represent standard error of the means.

5.3.2.2. Additional analyses

To replicate our findings in Study 1, we further analyzed the priming conditions separately. In the security prime condition, there was not a significant effect of attachment anxiety (β = 0.12, *SE* = 0.04, p = .313, 95% CI [−0.12, 0.04]) on WSR. These results illustrate how the security priming negated attachment anxiety's effect. However, in the neutral priming condition, in line with our first study's findings, there was a significant effect of attachment anxiety (β = 0.22, *SE* = 0.04, p = .006, 95% CI [0.01, 0.20]) on WSR (see Table 4).

Table 4

Study 2: Hierarchical Multiple Linear Regression Analysis for WSR for neutral priming condition

Variables	WSR			
			95% CI	
	Step 1(β)	Step 2 (β)	Step 1	Step 2
Age	0.01	0.05	[-0.01, 0.01]	[-0.01, 0.01]
Education	0.05	0.07	[-0.06, 0.11]	[-0.04, 0.12]
Attachment anxiety		0.22*		[0.01, 0.20]
Attachment avoidance		0.11		[-0.04, 0.18]
F	0.23	2.99*		
R^2	0.01	0.08		
ΔR^2		0.07		

Note. N = 150; β: Standardized coefficients, WSR: Willingness to stay in the relationship, CI : Confidence Interval.

Study 2 examined the association between experimentally enhanced attachment security and willingness to stay in an abusive relationship. Indeed, attachment security causally predicted reduced willingness to stay in the abusive relationship. Conforming and building on indirectly relevant findings (Mikulincer & Shaver, 2015; Park, 2016), we found that imagining a secure and supportive relationship lead women to imagine rejecting an abusive relationship. Building on the work of Corvo et al. (2018), our study has contributed to the newly developed concept of including attachment security priming in IPV interventions to obtain better treatment results, and our second study demonstrated its potential effectiveness.

5.4. General discussion

Although there is indirect evidence pointing to a link between attachment orientations and IPV victimization, to the best of our knowledge the interrelationships between them have not yet been studied widely. Furthermore, the majority of the studies have approached IPV from the perspective of perpetration (Spencer et al., 2020). In the present studies, we aimed to contribute to the development of a theory on the role of victim-related psychological mechanisms in explaining vulnerability to IPV victimization as a result of remaining in an abusive relationship. The purpose of the present studies was to investigate the individual differences that lie behind the decision to imagine staying in an abusive relationship despite IPV from a (potential) victim's point of view. Due to the relational nature of IPV, we based our predictions on attachment theory. In Study 1 study, we identified associations between attachment orientations (i.e., anxiety, avoidance) and willingness to stay in the abusive relationship. In Study 2, we identified a causal association between attachment (i.e., anxiety) and WSR with respect to attachment security priming. We hypothesized that attachment security priming would reduce WSR. Overall, the results regarding attachment orientation and WSR as a risk factor for IPV victimization confirmed our theory-based predictions.

Our finding is in line with earlier research that reported victims' attachment anxiety as a risk factor for IPV (see Velotti et al., 2018, for a review). Velotti et al. (2018) also mentioned in their review that the reason for women high in attachment anxiety to prefer staying in an abusive relationship might be the unbearable experience of anxiety that stems from the loss of the partner. Additionally, the tendency individuals with greater levels of attachment anxiety to suffer from low self-esteem and have a negative image of themselves as being undeserving of love and care (Mikulincer & Shaver, 2005) may lead them to think that they do not have sufficient resources to leave an abusive partner. Together with low self-esteem, these characteristics may lead to the self-attribution of blame for IPV.

Similarly, within the concept of tendency for interpersonal victimhood (TIV; Gabay et al., 2020) attachment anxiety was highlighted as the antecedent of TIV since relationships with attachment figures early in life shape adult working models of interpersonal relations and strongly affect relational attitudes, emotions, and behavioral strategies (Mikulincer & Shaver, 2016). Based on these working models, women high in attachment anxiety form their relationships with their

partners holding negative feelings for the partner, anticipating rejection or abandonment as well as seeking attention and compassion at the same time (see also Mikulincer & Shaver, 2016). Gabay et al. (2020) noted that these ambivalent feelings individuals with high attachment anxiety have towards the partner might increase the TIV. Thus, the subjective appraisal of IPV based on individual differences in adults' insecure models of attachment may play a role in whether the individual continues or rejects the abusive relationship. Furthermore, our finding appears to be consistent with the attachment literature, which states that anxiously attached individuals are hypersensitive to and preoccupied with intimate relationships compared to individuals that are not high in attachment anxiety (Mikulincer & Shaver, 2007; Siegel, 2012).

To the best of our knowledge, Study 2 was the first to explore the impact of security priming in terms of increasing the tendency to leave an abusive relationship. We successfully induced feelings of security by the 10 min of visualization followed by related open-ended questions. Our main finding was that security priming (compared to neutral priming) reduced willingness to remain in an abusive relationship. This finding is in line with research that presents induced secure schemas as guiding information processing, feelings, and behavior in orientation-congruent ways, as well as having positive outcomes in the short term (Carnelley et al., 2016; Mikulincer & Shaver, 2007, Mikulincer & Shaver, 2015). For example, in their studies Carnelley et al. (2016) first primed attachment anxiety and avoidance to test causal relationships between these attachment patterns and depressed and anxious mood. Attachment avoidance-primed participants reported higher anxious mood and anxiety-primed participants reported higher depressed mood as well as anxious mood than secure-primed participants. In their second study, these authors primed attachment security repeatedly (versus a neutral prime). Secure-primed (compared with neutral-primed) participants reported less anxious and depressed mood immediately after priming and one day later.

The priming effect in Study 2 was significant for medium to high attachment anxiety in reducing the tendency to imagine staying in the abusive relationship. We believe that the stronger effect of high attachment anxiety found in Study 2 may be due to the effect of security priming on attachment anxiety, which led to lower scores for dispositional attachment anxiety (Carnelley & Rowe, 2007). Our finding from Study 2 suggests the effect of security priming on trait-like measures via the activation of secure IWMs. Furthermore, this finding also suggests that activating

secure schemas seems to alleviate the need to continue relationship driven by fear of separation and abandonment (Rouleau et al., 2019; Schneider & Brimhall, 2014). Future research should examine the trajectory for WSR after more priming sessions because individuals might move towards greater security over longer intervals with more frequent security primes (Carnelley et al., 2018). According to Carnelley and her colleagues, the effect of one security prime may not persist for long, thus follow-ups for participants over a longer period are needed in order to examine the possible reasons for the maintenance or non-maintenance of their effects.

The present study is not without limitations. First our research design was based on a unidirectional physical IPV scenario. Although we investigated the relationships between attachment and IPV, other important correlates, such as poverty or lack of social support, may shed further light on this issue. In addition, our results are based on hypothetical rather than on real victimization. Our results suggest that individuals with high attachment anxiety may appraise separation as being more stressful than IPV. Although relevant research has presented a similar pattern regarding attachment anxiety and IPV victimization for both hypothetical and real victimization (Bartholomew & Allison, 2006; Bond & Bond, 2004), future studies should consider examining attachment anxiety as risk factor to (re)victimization among actual victims of IPV for generalizability. Another important limitation of our study is not including a manipulation check after secure-neutral primes. Even though manipulation checks support researchers to reassure if the priming has the intended effect, Hauser et al. (2018) mentioned that manipulation checks to test the validity might be problematic and threaten validity. What is more, we did show the effect of priming was not due to attachment orientations because priming groups did not differ significantly in terms of attachment anxiety and avoidance.

As another generalizability issue we included single heterosexual women, meaning that we focused exclusively on IPV at the hands of a male partner. Relevant research has recently included female aggression on male partners (Crane et al., 2014) and IPV within same-sex couples (Luca et al., 2018). Therefore, we believe that our predictions should be further investigated within same-sex couples as well as with male victims, expending our work to all contexts of IPV. Finally, we handled attachment orientations as well as IWMs as trait-like constructs. Although research in recent years suggests attachment representations to be dynamic and relationship-specific leading people to hold distinct working models in different relationships (Fraley et al., 2011), the

consensus is that dispositional attachment and situational attachment interact as well as accumulate and form experience with the present partner (Slootmaeckers & Migerode, 2018).

The findings of the present study have implications for practice. Because earlier studies have suggested that IPV is a dyadic process in which the characteristics of both partners, such as emotional aggression, frustration, and anger increase risk (Kuijpers et al., 2012), all factors should be considered when conducting risk assessments. Our findings from Study 1showed that victims' attachment orientations are important factors that can contribute to the continuation of an abusive relationship, which may increase the possibility of IPV revictimization. Because attachment anxiety was the strongest predictor of WSR, we believe that including this victim-related factor among risk assessment tools may improve IPV (re)victimization risk prediction.

Furthermore, inclusion of victim-related factors in risk assessment may improve treatment or support activities that are based on the victim's characteristics. Indeed, our second study proposes attachment security priming as an effective technique for inclusion in IPV (re)victimization prevention by reducing WSR despite an abusive partner. Interventions should be aimed at the psychoeducation of attachment orientations, related needs, as well as their effect on the perception of intimate relationships, and at minimizing these needs among anxiously attached women. Instead of using hyperactivation strategies, including remaining in a dysfunctional relationship, to cope with unpleasant experiences or threats, it may be advisable to focus on more effective coping styles as a strategy for reducing the risk of (re)victimization, such as problem-focused coping styles.

The present research contributes to our understanding of attachment theory as it shows that recalling security-inducing representations can lead to reduced willingness to stay in an abusive relationship in a non-clinical sample. There is great need to strengthen women's appraisals of themselves versus others, as well as to alleviate their relational needs, due to the high prevalence of IPV and (re)victimization among women, to encourage them to reject abusive relationships. In this sense, it is important to further examine the effects of security priming in this context, particularly as primes are easy to understand and administer, even in text form, require a small amount of time, and can be used alongside other treatments.

Table S1

Items and component loading of the WSR

	Items	Factor Loading Study 1	Factor Loading Study 2
1.	I would give him another chance	.86	.84
2.	I would try to work things out, everyone can make mistakes	.85	.85
3.	I would not try to work things out, violence must have a consequence	-.67	-.63
4.	I would try to cooperate with him to keep the relationship	.65	.59
5.	I would never give him another chance; this would be the end.	-.72	-.68
6.	I would not leave him	.83	.79

Note. KMO for Study 1 was 0.75, p<. 001; for Study 2 was 0.74, p< .001

Table S2

Correlations among WSR items

	Items	1	2	3	4	5	6
1	I would give him another chance	-	.82	-.34	.71	-.25	.51
2	I would try to work things out, everyone can make mistakes	.82	-	-.31	.71	-.29	.51
3	I would not try to work things out, violence must have a consequence	-.25	-.27	-	-.33	.47	-.27
4	I would try to cooperate with him to keep the relationship	.63	.69	-.28	-	-.23	.63
5	I would never give him another chance; this would be the end.	-.22	-.30	.53	-.24	-	-.26
6	I would not leave him	.49	.47	-.25	.62	-.29	-

Note. Upper half belongs to Study 1 whereas lower half belongs to Study 2

6. General Discussion

6.1. Brief review of the findings of Studies 1-4

Although attachment theory was originally created to understand the intense emotional bond that children develop with their caregivers, it is currently a widely used concept to understand emotion, cognition, behavior, and attitudes as well as personality development including self. That is, attachment theory is one of the leading frameworks for studying interpersonal as well as intrapersonal functioning (Fraley, 2019; Mikulincer & Shaver, 2016), and provided the theoretical basis for the current research. In this sense, Gillath and colleagues (2016) suggested attachment theory to be considered as a "Grand Theory" in contemporary psychology because of its multidisciplinary appeal (bringing together ideas and observations from social psychology, developmental psychology, behavioral neuroscience and psychobiology, animal behavior, and clinical psychology).

One of the main themes of adult attachment theory is that early experiences with the caregivers, once internalized, result in relatively enduring patterns that manifest in various adulthood outcomes (e.g., Raby et al. 2015). For instance, individuals who feel secure are most likely to have a cumulative history of responsive as well as supportive relationships starting from early years of their life (Hazan & Shaver 1987; Mickelson et al. 1997). What is more, Fraley and Roisman (2019) proposed socialization-selection asymmetries which supports the idea that IWMs dominates *the adulthood processes*. These authors suggested that, as people mature, person-driven processes begin to play stronger role in interpersonal interactions unlike the early years when socialization-driven processes were more prominent. In this regard, adults tend to seek out contexts that are congruent with their existing mental representations. In their research that focused on attachment orientations' affect within differences regarding daily functioning Sheinbaum and colleagues (2015) found that individuals' momentary affective states, cognitive appraisals, and social functioning varied in meaningful ways as a function of their attachment orientation. Furthermore, these authors demonstrated that the effects of attachment orientations on daily life experiences are manifested across a variety of contexts (and are not limited to interactional settings).

Throughout the research presented within the present dissertation, we tried to find possible explanations for various intrapersonal as well as interpersonal dynamics from attachment theory.

Specifically, this dissertation aimed to (i) investigate the associations between attachment orientations and self-concept clarity, empathy, resilience, coping mechanisms, partner preferences, and keeping the abusive relationship (ii) to test the broaden and build effect of attachment security-based schema activation through attachment security priming on partner preferences and tendency to keep the abusive relationship.

In Study 1, we worked on the factors (i.e., emotion-focused coping vs. problem-focused coping) that contribute to the connection between resilience and attachment. Two mediation models corresponding to the attachment dimensions assessed by the ECR-R (i.e., anxiety and avoidance) were tested. Individuals with high levels of attachment anxiety were less resilient to stress compared to others. Greater predisposition to activate emotion-focused coping and to dismiss the problem-focused coping strategies attenuated resilience among individuals high in attachment anxiety. emotion-focused coping and problem-focused coping fully mediated the relationship between attachment anxiety and resilience. By contrast, attachment avoidance was not related to resilience directly but through problem-focused coping only. Higher tendency to use problem-focused coping strategies were related with greater resilience among these individuals.

In Study 2, we investigated the possible associations between attachment orientations, SCC, and aspects of empathy (i.e., empathic concern and personal distress). Attachment avoidance and attachment anxiety were consistently associated with poor SCC (Studies 1 & 2). Attachment anxiety was positively associated with personal distress and empathic concern, while attachment avoidance was negatively associated with empathic concern but showed no significant relationship with personal distress (Study 2). Low SCC was an indicator for poor empathic concern but greater personal distress (Study 2). The findings indicated that SCC mediated the association between attachment anxiety and personal distress as well as empathic concern, while in the case of attachment avoidance there was no mediation effect of SCC on aspects of empathy.

In Study 3, we explored the relationships among attachment anxiety, NTB, and ideal partner BS. Two studies were conducted online and measured women's preference for ideal partner attitudes (i.e., endorsement of benevolent sexist attitudes), attachment style, and NTB levels. Study 2 also used an attachment security priming task (vs. neutral priming) in an attempt to retrieve and activate security schemas and establish causality. Higher levels of NTB were positively correlated with ideal partner BS, and this finding was strengthened by regression analyses, which indicated

that NTB was a significant predictor of preference for a partner who endorses BS. The interaction term for attachment anxiety and NTB also showed that this relationship is stronger in the case of higher levels of attachment anxiety. In Study 2, we found that security priming induced felt security and attenuated ideal partner BS by reducing NTB.

In Study 4, we aimed to contribute to the development of a theory on the role of victim-related psychological mechanisms in explaining vulnerability to IPV victimization as a result of remaining in an abusive relationship. The purpose of the two studies was to investigate the individual differences that lie behind the decision to imagine staying in an abusive relationship despite IPV from a (potential) victim's point of view. In Study 1, attachment anxiety was positively and significantly related with WSR despite the abuse whereas attachment avoidance did not indicate a significant association with WSR. In Study 2 we found that security priming (compared to neutral priming) reduced willingness to remain in an abusive relationship.

6.2. Discussion of the findings

Following the organization of the General introduction section, in this section I aimed to review and discuss how the results of Studies 1-4 fit into the existing literature.

6.2.1. Resilience and Coping

In Study 1, our findings were in line with the core assumptions of attachment theory with respect to insecure attachment patterns. Individuals high in attachment anxiety develop a negative internal model of the self, leaving them with the tendency towards negative portrayals of the self and of one's abilities, attribute threat-related events to individual inadequacies, due to their interpersonal histories that are dominated by feelings of failure and helplessness (Bartholomew & Horowitz, 1991; Mikulincer & Shaver, 2016). Individuals who are high in attachment anxiety may be less resilient due to the shifting of focus to the self rather than to the problem. Since self-efficacy is an underlying factor that fosters resilience (Collishaw et al., 2016), the sense of lack of control over keeping proximity to attachment figures despite the substantial efforts might form the basis to low self-efficacy beliefs and interfere with resilience among individuals high in attachment anxiety. Our study demonstrated the impairing effect of attachment anxiety on resilience, and our data are supported by the existing literature (e.g., Rasmussen et al., 2019).

The results were also in agreement with the assumption that individual's attachment orientation might predispose them to adopt a specific coping strategy. Emotion-focused coping strategies have been positively correlated with attachment anxiety within Study 1 in line with the assumption that the early attachment experiences of insecure individuals interfere with the development of inner resources needed for coping successfully with stressors (Mikulincer & Shaver, 2019). Attachment anxiety is characterized by employing hyperactivation strategies, in order to attract the attention of the attachment figure and be soothed when faced with threats. Hyperactivation strategies include the exaggeration of threats, overdependence on the attachment figure, and hypervigilance to threat when faced with distressing situations (Mikulincer & Florian, 1998; Mikulincer & Shaver, 2007). Although the use of hyperactivation and emotion-focused strategies (e.g., self-blame, self-criticism, rumination, focus on negative emotions, and feelings of helplessness) by individuals high in attachment anxiety is to some extent effective in maintaining the attention of the attachment figure, these strategies may serve to intensify anxiety, which has been found to interfere with the development of resilience traits (Cantazaro & Wei, 2010; Pascuzzo et al., 2015).

Individuals high in attachment avoidance try to control their emotions by blocking or inhibiting any feeling that is not in line with their goal of deactivating attachment needs and tendencies. Fear, anxiety, anger, sadness, shame, guilt, and distress are the primary targets of these inhibitory efforts because they are linked to threats and feelings of vulnerability. Thus, the null direct association between attachment avoidance is in line with Jenkins's statement (2016), that "…the conflicting coping responses make it difficult to ascertain whether attachment avoidance can genuinely promote resilience…" (p.68). Although attachment avoidance seemed to foster resilience, the link was established only through problem-focused coping. It seems that individuals high in attachment avoidance become more resilient because they use less problem-focused coping strategies. This is in line with the findings that present the positive connection between tendency to use 'avoidance-focused' coping strategies (i.e., diverting attention from anxiety provoking stimulus) and attachment avoidance (Marriner et al., 2014). This finding is also in line with the argument that attachment avoidance working similar to attachment security in adversity; both seem to be related with less distress compared to attachment anxiety (Mikulincer & Shaver, 2007).

The positive (indirect) link between attachment avoidance and resilience is not surprising since compulsive self-reliance of individuals that are high in attachment avoidance reinforce their belief that they are competent to manage stressful situations (Mikulincer & Shaver, 2007). In this sense, although both attachment avoidance and attachment security seem to promote resiliency (e.g., Karreman & Vingerhoets, 2012), the manner they are connected to resilience might be different. While problem focused coping is positively related with resilience (de la Fuente et al., 2017), as well as with attachment security (Bender & Ingram, 2018), individuals high in attachment avoidance seem not to benefit from it. As attachment avoidance has been associated with a minimal distress or distress response to stressors, and individuals high in attachment avoidance preferably distance themselves from the stressor to cope with it (Mikulincer & Shaver, 2007), problem focused coping strategy that involves facing with the stressor might contradict with the defense mechanism based on stress-denial and might increase perceived threat as well as unpleasant emotions. Indeed, when distressed, individuals high in attachment avoidance tend to divert their attention away from perceived threats, which also serves for emotional dissociation—a learned defense mechanism to manage stress within the self— in order to conceal the feelings of insecurity (Mikulincer & Shaver, 2007). High level of resilience that goes along with attachment avoidance might be more defensive than that of attachment security since it requires an effort to divert attention from actual problem instead of actively focusing on the problem.

Aside from the indirect influence of attachment, problem-focused coping was positively associated with resilience, whereas emotion-focused coping was negatively associated with resilience. In other words, the type of coping strategy adopted is a crucial factor for resilience and, in turn, for well-being in the face of adversity. The findings of the present study regarding the significant associations between coping strategies and resilience are also consistent with the findings of earlier studies (e.g., Villasana et al., 2016), which indicated that problem-focused coping significantly fostered resilience, whereas emotion-focused coping strategies had a detrimental effect on resilience. Indeed, coping based on emotions and distraction correlated negatively with resilience, while task-oriented coping correlated positively with it (Secades et al., 2016).

Overall, the results of the present study demonstrate the important role of attachment in the facilitation of resilience. Our findings indicate that attachment orientations are likely to be

important in building resilience, which may reduce the risk of adverse outcomes. However, this association is mediated by coping strategies, which are also affected by attachment orientations. In a broader sense, our findings suggest that attachment anxiety is a risk factor that negatively impacts well-being by predisposing individuals to show both poor resilience traits and ineffective coping strategies in the face of distress.

6.2.2. Self-concept clarity and empathy

In Study 2, the strongest relationship regarding attachment anxiety was with personal distress and it was partially mediated by SCC. Basing on the "theory of mind" we believed that this finding might be due to the excessive motivation among individuals high in attachment anxiety to merge with others in their attempt to find closeness, which may predispose them to being unable to differentiate between their own and others' distress, while making them more vulnerable to personal distress. In their study, Krol and Bartz (2021) reported that greater self–other merging may be one of the mechanisms underlying the emphatic difficulties experienced by individuals with low SCC. Our findings contribute to this work by showing that a clear and coherent sense of self has an additional effect in the case of attachment anxiety—prompted by the tendency toward excessive self–other merging (Mikulincer & Shaver, 2016)—when empathizing with others.

In line with the previous findings where higher levels of attachment avoidance was reported as a threat to a clear sense of self (Emery et al., 2018), we found a negative and significant association between attachment avoidance and SCC. Despite the significant direct link, SCC did not mediate attachment avoidance and empathy. In other words, although resisting interdependence impairs an individual's clear sense of self (Study 1 & 2), SCC seems to be irrelevant with respect to empathy among individuals high in attachment avoidance. Since attachment avoidance was shown to be associated with low levels of personal distress (Study 2), it may be the case that individuals high in attachment avoidance are using mechanisms (e.g., emotion regulation) other than the self–other distinction when it comes to empathy. As attachment avoidance is characterized by a fear of closeness, which is accompanied by negative IWMs of others, individuals with high levels of attachment avoidance may be applying deactivation strategies (i.e., repressing emotional states that can evoke the attachment system while maintaining compulsive self-reliance; Mikulincer & Shaver, 2007) in the case of empathic processes (manifesting as low levels of personal distress and no empathic concern in Study 2) while not

engaging self-related mechanisms at all. Specifically, these individuals may automatically disengage from the distressing stimuli (e.g., perceptions of others' discomfort) before engaging the self, in an attempt to block or inhibit any emotional state that is incongruent with the goal of keeping their attachment needs deactivated (Mikulincer & Shaver, 2016). Indeed, attachment avoidance has been linked with avoidance-focused coping strategies that include minimizing, denial, or withdrawal from stressors (Marriner et al., 2014). The relevant results from the present study are in line with earlier research.

Specifically, we showed that individuals with low SCC reported higher personal distress and low empathic concern. Thus, an unclear sense of self predisposes an individual to experience greater self-focused distress and less other-oriented concern when confronted with another individual in distress. In other words, without a clear and coherent sense of self to draw on, individuals seem to have more trouble distinguishing their own distress from that of another person, which is manifested in heightened personal distress and lowered empathic concern. Our findings are in line with earlier research. Krol and Bartz (2021), across five studies that included both correlational and causal interpretations, reported that a clear self–other differentiation is of the utmost importance not only in terms of mature and adaptive empathic responses but also for actual helpful behavior.

Attachment orientations and SCC were linked to explain individual differences in aspects of empathy, while sense of security (i.e., attachment orientations) and theory of mind (i.e., the ability to differentiate between self and other) are introduced as theoretical bases for the incorporation of these constructs into empathy. We have demonstrated that a clear, coherent, and stable sense of self is derived from the attachment system and differs across attachment orientations, while both attachment orientations and SCC are important elements of empathy.

6.2.3 The costs of heightened attachment needs

Within this section, I will be mentioning Study 3 and the Study 4 as they were both related with romantic relationship dynamics. More specifically we showed the potential costs women high in attachment anxiety are predisposed to face because of their IWMs and needs. The next chapter will be about attachment security schema activation as a self-help tool to promote empowerment for these women to reduce the costs mentioned below.

The two studies within Study 3 illustrated that a greater need for relationship security and belongingness orient women high in attachment anxiety to prefer partners who hold BS attitudes, as these attitudes are appraised as signaling the partner's reliability, investment, permanency, and devotion. The relationship between NTB and ideal partner BS was strongest in the case of higher levels of attachment anxiety. These findings complement the core feature of attachment anxiety that is reflected as a desire for closeness and a worry of being rejected by or separated from significant others (Brennan et al., 1998; Bifulco and Thomas, 2012). With respect to the IWMs associated with attachment anxiety—mental representations of the self as negative and others as positive—individuals who are high in attachment anxiety regard others as the source for the fulfillment of their intimacy needs, thus they may be motivated by strong NTB (e.g., Bartholomew & Horowitz, 1991). Furthermore, these individuals fixate excessively on the approval of others and on the permanence of relationships, which are also core features of belongingness. In this sense, individuals who are high in attachment anxiety may have an inordinate need to belong, to fit in, or to feel accepted (Bartholomew & Horowitz, 1991; Baumeister & Leary, 1995).

Study 4 aimed to contribute to the development of a theory on the role of victim-related psychological mechanisms in explaining vulnerability to IPV victimization as a result of remaining in an abusive relationship. Specifically, we investigated the individual differences that lie behind the decision to imagine staying in an abusive relationship despite IPV from a (potential) victim's point of view. Our finding is in line with earlier research that reported victims' attachment anxiety as a risk factor for IPV (see Velotti et al., 2018, for a review). Velotti et al. (2018) also mentioned in their review that the reason for women high in attachment anxiety to prefer staying in an abusive relationship might be the unbearable experience of anxiety that stems from the loss of the partner. Additionally, the tendency individuals with greater levels of attachment anxiety to suffer from low self-esteem and have a negative image of themselves as being undeserving of love and care (Mikulincer & Shaver, 2005) may lead them to think that they do not have sufficient resources to leave an abusive partner. Together with low self-esteem, these characteristics may lead to the self-attribution of blame for IPV.

Similarly, within the concept of tendency for interpersonal victimhood (TIV; Gabay et al., 2020) attachment anxiety was highlighted as the antecedent of TIV Women high in attachment anxiety form their relationships with their partners holding negative feelings for the partner,

anticipating rejection or abandonment as well as seeking attention and compassion at the same time (see also Mikulincer & Shaver, 2016). Gabay et al. (2020) noted that these ambivalent feelings individuals with high attachment anxiety have towards the partner might increase the TIV. Thus, the subjective appraisal of IPV based on individual differences in adults' insecure models of attachment may play a role in whether the individual continues or rejects the abusive relationship. Furthermore, our finding appears to be consistent with the attachment literature, which states that anxiously attached individuals are hypersensitive to and preoccupied with intimate relationships compared to individuals that are not high in attachment anxiety (Mikulincer & Shaver, 2007; Siegel, 2012).

6.2.4 Attachment security schema activation as a tool to attenuate the costs of heightened attachment needs

Although attachment researchers often focus on insecurity, recent research is emphasizing the ways in which secure attachment dynamics can allow individuals to thrive through their relationships (for reviews, see Gillath et al., 2016, Mikulincer & Shaver 2016). Indeed, attachment security priming was found to promote prosocial behavior, empathy, and altruism (Mikulincer & Shaver, 2015), to influence positive affect in individuals with depression (Liao, 2017). Regarding the previous findings among women high in attachment anxiety, we believe there is great need to strengthen their appraisals of self versus others and to alleviate their relational needs, due to the heightened preference for a partner endorsing BS attitudes as well as the greater prevalence of (re)victimization through IPV. We decided on working with attachment security priming because it is easy to understand even in text form, requires a small amount of time, and can be used alongside other treatments.

By adding an experimental paradigm in the second part of Study 3, we showed that activating attachment security schemas enhances felt security and attenuates NTB, which in turn reduces the preference for potential partners who endorse BS attitudes. Our results were in line with the assumption of the “broaden and build” cycle of attachment security (Fredrickson, 2001; Mikulincer & Shaver, 2020). According to this assumption, the enhanced sense of attachment security that results from actual or imagined interactions with sensitive and responsive attachment figures builds one's resilience and broadens one's perspectives and skills. In this sense, the activation of secure attachment schemas seems to allow people to divert their attention away from

attachment-related worries and defenses. Our findings also corresponded to the statement made by Mikulincer and Shaver (2020) that "…both interactions with responsive attachment figures (at the interpersonal level) and the activated positive working models as well as secure-base script (at the intrapersonal level) contribute to one's emotional strength…" (p. 3).

Conforming and building on indirectly relevant findings (Mikulincer & Shaver, 2015; Park, 2016), in Study 4 we found that visualizing a secure and supportive relationship lead women to imagine rejecting an abusive relationship. This finding suggested that activating secure schemas have a potential to alleviate the need to continue relationship driven by fear of separation and abandonment (Rouleau et al., 2019; Schneider & Brimhall, 2014). More specifically, felt security through security priming seems to attenuate hyperactivation strategies, including remaining in a dysfunctional relationship, to cope with unpleasant experiences or threats This is also in line with research that presents induced secure schemas as guiding information processing, feelings, and behavior in orientation-congruent ways, as well as having positive outcomes in the short term (Carnelley et al., 2016; Mikulincer and Shaver, 2007, Mikulincer and Shaver, 2015).

Building on the work of Corvo et al. (2018), Study 4 has contributed to the newly developed concept of including attachment security priming in IPV interventions to obtain better treatment results, and our second study demonstrated its potential effectiveness. In different contexts, "earned secures" have been shown to perform nearly as well as "continuous secures" (Mota & Matos, 2015; Phelps et al., 1998), suggesting that attachment security inducement is a possible method for improving coping strategies and fostering resilience.

6.3 Limitations, strengths, and future directions

The findings of the dissertation should be interpreted cautiously due to various limitations of the included studies. Before getting into each study separately, I want to draw attention to the correlation between attachment anxiety and avoidance that has been presented in most of the studies included. Even though this appears like a discrepancy between the theory and measurement, our finding is in line with the literature and seems to be a function of preferred scale (ECR-R). Cameron and colleagues (2012) conducted a meta-analysis to examine the association between anxiety and avoidance. They found that the correlation between the two dimensions tends to be in the medium range with the ECR-R ($r = .41$). We believe this might occur because these two dimensions both stem from negative experiences with attachment figures that interferes with

IWMs even though they have different outcomes which is observable through the associations they make with various variables (for example both associate with lower levels of SCC however they differed in terms of empathy in Study 2). That is, instead of being their polar opposites, both attachment avoidance and anxiety dimension might be measuring the deviation from attachment security. The main question here then becomes what do attachment anxiety and avoidance represent? Based on this question, there is still an extensive debate going on. Bartholomew (1990) proposed conceptualizing the dimensions within the model of self and others framework; anxiety dimension as "model of self" (positive vs. negative) and the avoidance dimension as "model of others" (positive vs. negative) (see also Bartholomew & Shaver, 1998). However, Fraley and Shaver (2000) suggested that the manifest content of the items used for measuring variation in attachment (e.g., ECR-R) reflects the sensitivity to rejection (attachment anxiety) and strategies for regulating affect (attachment avoidance) rather than the model of self-other and as a result they provided an affective-motivational framework (see also Fraley & Shaver, 1998; Fraley & Spieker, 2003). Variation in people's threshold for detecting threats to security or cues of rejection corresponds to individual differences in attachment-related anxiety whereas variation in individuals' preference for relying on others accounts for individual differences attachment-related avoidance. This enables researchers to make a distinction between different attachment dynamics and to not assume that being high in attachment anxiety automatically accompanies being low in attachment avoidance (see Gillath et al.,2016).

In Study 1, we used a non-WEIRD sample—Turkish individuals— and although the findings may provide an insight into resilience and attachment orientations among this population, they cannot be generalized to other populations, since the COVID-19 pandemic has both universal and country-specific effects due to differences in the handling of the pandemic, including, but not limited to, the extent of the economic support provided to citizens and the different quarantine policies. Additionally, we gathered data from July 2020 to the end of 2020. Considering that COVID-19 vaccination started at the beginning of 2021 within Turkey, we argue that individuals' attitudes regarding the pandemic might differ during pre-vaccination compared to post-vaccination era. Indeed, Balaban and colleagues (2023) found that COVID-19 anxiety levels decreased whereas positive attitudes towards the pandemic increased after the vaccination among a Turkish sample. In this sense, one should note that our findings provide insight into resilience, coping and attachment association for pre-vaccination period in Turkey. What is more, we believe having a

non-WEIRD sample contributes both testing the universality and culture-specific aspects of research in adult attachment field because even though the WEIRD countries constitute only a small minority of the world's population, the vast majority of psychology research including studies on attachment have been carried out within these nations (Henrich et al., 2010). In this sense even though we were not interested in cultural differences, we believe that our findings from a non-WEIRD population might provide data for future research.

The study was cross-sectional; thus, no causal inferences can be drawn. What is more, two-third of our sample consisted of female participants. Even though we could not find an effect of gender while running the analyses, we believe findings might differ due to gender since gender is an important biological determinant of vulnerability to psychosocial stress (Wang et al., 2007). Indeed, in a recent survey conducted in China during COVID-19 outbreak women reported higher post-traumatic stress symptoms (Liu et al., 2020). On the other hand, we did not study the degree participants were affected by COVID-19 pandemic. We believe measuring various COVID-19 related stress factors (e.g., job-loss, loss of loved ones, going through the illness) in the future could provide deeper understanding to present study's findings.

To the best of our knowledge, no study has investigated the attachment orientations, coping and resilience association during the ongoing COVID-19 pandemic so far. To build on our findings, researchers may wish to focus on the role of different dysfunctional coping strategies (e.g., avoidance-oriented) for attachment and resilience association. Researchers may also wish to examine the role of different attachment orientations and dysfunctional coping strategies on resilience using manipulation methods, including priming, to investigate causality (Rowe et al., 2020). Specifically, inducement of attachment security based on security priming exercises might guide individuals towards the problem-focused coping strategies that can enhance their resilience. In this sense, the concept of "earned security"—that is, the acquiring of attachment security later in life based on secure contexts (i.e., through a relationship with a secure partner, or felt security following an attachment security priming task; Mota & Matos, 2015; Shibue & Kasai, 2014) might provide a deeper understanding between attachment and resilience. Indeed, security priming has been shown to increase attachment security (Lin et al., 2013), which is associated with balanced resilience (Oehler & Psouni, 2018).

It is important to note that we handled attachment as a universal concept (as an evolved behavior system; (Bowlby, 1969)), that is based on proximity seeking attempts (towards an attachment figure) upon encountering a threat to alleviate distress (as a form of "inclusive fitness") which fosters individuals' social adaptation and psychological wellbeing, above and beyond the cultures. That is, we did not focus on the role of cultural context on variations in attachment. However, there is considerable evidence that shows how cultures differ regarding the models of autonomy, relatedness, socialization goals, accepted proximity seeking behaviors and caregiving strategies (Keller, 2016). Taken into consideration, individualistic cultures and collectivistic cultures might differ in terms of attachment patterns since the former one values independence, self-sufficiency, and one's personal identity whereas the latter one collectivism has been found to be related positively with attachment anxiety (Frías et al., 2014), whereas there has been no significant association between individualism and attachment anxiety (Frías et al., 2014; Wang & Ratanasiripong, 2010). On the other hand, attachment avoidance is positively related with individualism since these two constructs both put an emphasis on self to maintain independence and self-sufficiency (Brennan et al., 1998; Singelis et al.,1995). Additionally, in their study where individualism and collectivism were tested as moderators between attachment orientations and psychological outcomes (depression, stress, and anxiety), Lin and colleagues (2017) reported that attachment avoidance correlated with lower levels of collectivism and higher levels of individualism (see also Frias et al., 2014). What is more, attachment anxiety was related with poorer psychological outcomes at the higher levels of collectivism and lower levels of individualism. What is more, Posada and colleagues (1995) state that not only the distribution of attachment orientations but also the desired version of attachment behaviors varies across cultures. Indeed, according to Main (1990) attachment orientations might be adaptive to specific context. That is, attachment anxiety and avoidance might not carry same negative implications across cultures, and we believe future research including the role of context might enrich our knowledge regarding the associations between attachment orientations and the outcome variables in question.

In Study 2, we included only empathic concern and personal distress, which are the affective aspects of empathy. The dynamics among all the variables used in the present research may differ in terms of the cognitive aspects of empathy (i.e., perspective taking and fantasy). For example, Krol and Bartz (2021) found that SCC was negatively associated with fantasy, whereas there was no association with perspective taking. Future research might usefully include cognitive

aspects in terms of both theory and statistics. We approached attachment orientations as relatively stable and trait-like characteristics. However, recent literature suggests context- or relationship-specific attachment models (Fraley et al., 2015), according to which empathic processes or responses may change as a result of situational or contextual factors (Cassidy et al., 2018). Additionally, the Cronbach alpha coefficient of the empathic concern scale was lower than .70 in the present study. Previous research has also suggested that empathic concern has low alpha coefficients. Zang and colleagues (2010) reported a Cronbach's alpha of only .52 similar to our findings. Based on internal consistency concerns over the empathic concern subscale, future research could use Hungarian versions of other empathy measures or test the most relevant items for Hungarian version of the IRI. For instance, Chiang and colleagues (2014) worked on Chinese version of IRI and following their exploratory factor analyses, they suggested to use only three items from the original scale.

The two studies in Study 2 have several strengths, too. We had relatively large sample sizes (total N = 1553); the combination of student (Study 1) and community (Study 2) participants. There were internal replications and consistent results across these different samples (i.e., the relationships between attachment orientations and SCC). Furthermore, Study 2 contributed to filling a gap in the literature on attachment and empathy by emphasizing that SCC has additional effects on associations between attachment anxiety and the affective aspects of empathy associations. To the best of our knowledge, no previous research has demonstrated links among SCC, attachment orientations, and empathy in combination. Although a host of other psychological and social mechanisms play a role in shaping empathic processes (see emotion regulation; Thompson et al., 2019), we did show that attachment orientations as well as SCC deserve increased attention in this context.

In terms of expanding the theory and outlook, Study 3 linked ambivalent sexism, NTB, and attachment theory to examine the conditions under which women are more likely to prefer their potential partner to endorse benevolent sexist attitudes. Previous research has shown that preoccupation with relationship security (i.e., attachment anxiety) is linked to traditional relationship scripts (i.e., BS; Fisher & Hammond, 2019; Hart et al., 2012). However, no previous studies had examined the relationship between NTB, attachment anxiety, and ideal partner BS. We investigated previously mentioned associations in both a cross-sectional and causal manner. The

research also extends the well-established body of literature on brief manipulations of mental representations of attachment security in adults, with the aim of changing attachment-related outcomes (e.g., empathy, altruism, views of the self and others, exploration, concern for the self and others, and mood and mental health; for reviews see Mikulincer & Shaver, 2007). Furthermore, our data was from countries with a relatively low representation in the relevant fields.

To the best of our knowledge, Study 4 was the first to explore the impact of security priming in terms of increasing the tendency to leave an abusive relationship. We successfully induced feelings of security by the 10 min of visualization followed by related open-ended questions. We were able to illustrate that the effect of priming was not due to attachment orientations because priming groups did not differ significantly in terms of attachment anxiety or avoidance. On the other hand, unlike the majority of the studies that have approached IPV from the perspective of perpetrator (e.g., Spencer et al., 2020), we investigated victim related differences. Including victim-related factors (e.g., attachment orientations in Study 4) in risk assessment may improve treatment or support activities that are based on the victim's characteristics. Indeed, our second study proposes attachment security priming as an effective technique for inclusion in IPV (re)victimization prevention by reducing WSR despite an abusive partner.

The effects of attachment security priming discussed in Study 3 and Study 4 were based on self-reports and imagined scenarios rather than actual behavior or existing relationships. Future research should investigate this possibility. Additionally, we only measured effectiveness of security schema activation right after participants' exposure to priming. In this sense, future research might investigate the effectiveness of the prime across time because individuals might move towards greater security over longer intervals with more frequent security primes (Carnelley et al., 2018). In Study 3 the priming task was supraliminal and based on recall, but primes of these types risk external validity problems, since only those individuals who are able to recall a relevant relationship are included in the analyses (Sakaluk, 2014). Future studies might include individuals who are unable to recall any relevant memories and might check for differences with respect to the variables in question. Secondly, using imagined scenarios to prime attachment security may have introduced a level of variability in terms of the way in which participants accessed these representations (Selcuk et al., 2012). For example, higher attachment anxiety is associated with

the poorer accessibility of positive memories (Mikulincer & Orbach, 1995). Future studies might control the effect of attachment orientations on the vividness and accessibility of the requested memories/scenarios.

In Study 4, our research design was based on a unidirectional physical IPV scenario. Although we investigated the relationships between attachment and IPV, other important correlates, such as poverty or lack of social support, may shed further light on this issue. In addition, our results are based on hypothetical rather than on real victimization. Our results suggest that individuals with high attachment anxiety may appraise separation as being more stressful than IPV. Although relevant research has presented a similar pattern regarding attachment anxiety and IPV victimization for both hypothetical and real victimization (Bartholomew & Allison, 2006; Bond & Bond, 2004), future studies should consider examining attachment anxiety as risk factor to (re)victimization among actual victims of IPV for generalizability. Another important limitation of our study is not including a manipulation check after secure-neutral primes. Even though manipulation checks support researchers to reassure if the priming has the intended effect, Hauser et al. (2018) mentioned that manipulation checks to test the validity might be problematic and threaten validity. What is more, our sample included individuals with different cultural backgrounds. While we focused primarily on the individual differences regarding priming scenarios, we believe it might be important to consider the role of context for the ecological validity of these scenarios.

As a generalizability and ecological validity issue in Study 4, we included single heterosexual women, meaning that we focused exclusively on IPV at the hands of a male partner. Relevant research has recently included female aggression on male partners (Crane et al., 2014) and IPV within same-sex couples (Luca et al., 2018). Therefore, we believe that our predictions should be further investigated within same-sex couples as well as with male victims, expending our work to all contexts of IPV. Finally, we handled attachment orientations as well as IWMs as trait-like constructs. Although research in recent years suggests attachment representations to be dynamic and relationship-specific leading people to hold distinct working models in different relationships (Fraley et al., 2011), the consensus is that dispositional attachment and situational attachment interact as well as accumulate and form experience with the present partner (Slootmaeckers & Migerode, 2018).

6.4 Practical Implications

Throughout the four studies covered within the present dissertation, we were able to demonstrate the disruptive effect of IWMs related to attachment anxiety and attachment avoidance on various intrapersonal as well as interpersonal processes. Following these findings and the relevant literature, we believe it is important to provide trainings to develop insights about attachment orientations and their functions among several contexts (e.g., daily life, intergroup engagements, romantic relationships). For example, findings from Study 4 showed that victims' attachment orientations are crucial factors that can contribute to the continuation of an abusive relationship, which may increase the possibility of IPV revictimization. Because attachment anxiety was the strongest predictor of WSR, we believe that including this victim-related factor among risk assessment tools may improve IPV (re)victimization risk prediction. In a broader sense, by orienting therapy sessions to the specific fears and needs associated with attachment anxiety (e.g., excessive fear of abandonment, greater need for relationship security), individuals high in attachment anxiety may be able to respond to their hyperactivation strategies in more healthier ways (Arriaga & Kumashiro, 2021; Kumashiro & Arriaga, 2020). With regards to individuals high in attachment avoidance, therapists/supervisors may want to use strategies that respect avoidants' autonomy while still promoting greater interdependence since these individuals tend to give less priority to relationships and more importance on independence and self-reliance as a form of defense mechanism to avoid attachment related setbacks. Knowing about the individual differences (e.g., attachment orientations and IWMs) is important for effective treatment, which was a key consideration in the current research.

Improving attachment security schemas may benefit individuals low in attachment security by interfering with descent appeal of secondary strategies. That is, increasing individuals' sense of security might attenuate their characteristic defenses (see also Arndt et al., 2002). For instance, in Study 4, recalling security-inducing representations led to reduced willingness to stay in an abusive relationship in a non-clinical sample. Although Study 3 and Study 4 clearly revealed the effectiveness of attachment security priming on minimizing excessive relationship security as well as belongingness need among women high in attachment anxiety, more research that addresses hyperactivation and deactivation strategies specifically and test attachment security priming's effect on these strategies as a possible intervention to improve affect regulation skills as well as

cognitive openness (flexibility) is needed. Due to the links between attachment security and cognitive flexibility (Mikulincer & Arad, 1999), as one of the key features for exploratory behavior that fosters mastery of environment, emotions, new skills as well as distressing thoughts (Ainsworth et al., 1978), attachment security priming might facilitate cognitive openness which in turn guide appraisals and attitudes. What is more, assimilation of new information into existing schemas might be enhanced through attachment security unlike attachment anxiety and avoidance which are associated with cognitive rigidity (Mikulincer, 1997).

Findings from Study 3 and Study 4 suggest that attachment security priming, especially given its easily understandable and administrable format may be a useful tool in addition to other treatment procedures. For example, as mentioned by Bennion and colleagues (2017) mobile phone apps for mental health are used to support the healing process and they are effective. Following this trend, mobile attachment security priming might also be promoted as an easily accessible self-help technique as part of an intervention (see also Oehler & Psouni, 2018).

From a different standpoint, helping individuals to adopt security enhancing behaviors might attenuate the derogatory effect of secondary strategies. For example, a relationship partner's (e.g., family member, romantic relationship partner, best friend) supportive as well as responsive behavior was found to have long term positive effects on attachment insecurities (e.g., Arriaga et al., 2014). What is more, the adaptive benefits of sense of security might be transferred into broader settings such as intergroup contexts. Indeed, enhancing attachment security schemas has been shown to be associated with reduced prejudice, less discriminatory attitudes, and behavior toward outgroup members (see Mikulincer & Shaver, 2022 for a review).

6.5 Conclusions

Despite the need for further research, the studies included here strongly suggest that attachment orientations as displays of IWMs are strong factors that predispose individuals to perceive, feel and act in certain ways. What is more, we showed that inducing sense of security through attachment security priming might attenuate the detrimental choices (e.g., tendency to be with benevolently sexist partner or not leaving an abusive partner) individuals with greater attachment anxiety make because of their heightened attachment related needs. In a broader sense, we were able to illustrate the positive psychological effects of the activation of mental representations

related to attachment security and the possibility to alter an individual's felt security, at least temporarily.

7. References

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