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Man-Up When Down — Gender-Specific Coping With Life Stressors

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Abstract

Socialization into gender roles shapes the perception of the world from an early age which might, amongst others, constrain how one handles challenging situations. Therefore, this research aimed at investigating gender-specific coping mechanisms following life stressors in a nonclinical sample. The present study first hypothesized that women are more likely than men to seek emotional social support. A second hypothesis concerned that men are more likely than women to use substances, in line with the self-medication hypothesis. The third hypothesis maintained that those who embrace stereotypical gender roles implicitly manifest more extreme coping mechanism and that this implicit association variable proves better than the original gender variable at predicting coping. In total, 132 participants completed an online questionnaire including the Life Stressor Checklist–Revised, the COPE Inventory, an experimental design of the Implicit Association Test as well as an explicit measure, both to examine the gender self-concept. The results supported that men tended to be less likely to seek social support and more likely to use substances than women. Contrary to predictions of the third hypothesis, a stereotypically masculine or feminine self-concept only predicted coping with social support but not with substance use. Hence, this implicit variable was a superior predictor to gender with social support whereas the reversed pattern emerged for substance use. These findings could lead to an increased consideration of implicit gender stereotypes to unveil their hidden toxic influence on mental health.

Keywords: gender differences, coping, Implicit Association Test, toxic masculinity, gender stereotypes, self-medication, social support

Man-Up When Down — Gender-Specific Coping With Life Stressors

Nowadays, gender equality is high on the political agenda in Western countries, and a fair amount of voices converge in the effort to provide the same opportunities for men and women (World Economic Forum, 2018). In line with *social role theory* (Eagly & Wood, 2012, p. 458), gender stereotypes shift dynamically depending on the roles that are taken on in a society by men and women. In this sense, Scandinavian countries have set a leading role for how gender equality can be implemented as an integral part of policy. These efforts have resulted in changing gender roles, for instance, parental leave also for fathers (Duvander, Lappegård, & Andersson, 2010). This greater involvement of fathers in childrearing appears to loosen gender stereotypes and continuously modify the traditional distribution of gender roles. Nevertheless, these promising developments run the risk of overshadowing or even masking the implicit ways in which gender roles continuously limit the individual.

On a regular basis, women suffer directly from constraining stereotypes and, for instance, underestimate their performance in stereotypically masculine domains such as math (Tellhed & Adolfsson, 2018). This phenomenon has been termed *stereotype threat* (Steele & Aronson, 1995, p. 797) because in situations where stereotypes are salient the respective person fears confirming the stereotype. At the same time, the societally acceptable scope of action is smaller for men than for women (Gustafsson Sendén, Klysing, Lindqvist, & Bäck, 2019). To illustrate this, the concepts of agency and communion are central because they are at the core of a what entails masculinity versus femininity (Feingold, 1994). Hereby, agency represents broadly speaking a reliance on independence and own needs whereas communion constitutes an external focus consisting of interdependence and an urge to meet others' needs (Helgeson, 1993). Even though it is continuously accepted that women incorporate agency—a

trait originally considered to be more characteristically masculine—men who embrace

communal social roles are stigmatized for not fitting into the male stereotype (Gustafsson

Sendén et al., 2019). In addition, an examination of leadership styles has shown that women

were encouraged to be more assertive whereas men were granted less freedom to embrace

more feminine leadership styles, and therefore a masculine management style prevailed

(Powell, Butterfield, & Parent, 2002). This overall effect persisted despite the moderating

effect of age on gender roles meaning that those roles were perceived to be more equal

between men and women as people grew older (Lopez-Zafra & Garcia-Retamero, 2012). In

practical terms, society grants men less space to act in stereotypically feminine ways such as

to seek social support or express emotions openly (Gustafsson Sendén et al., 2019).

The existence of more than two gender identities beyond the male–female dichotomy

has to be acknowledged as gender can be regarded as a social construct and can manifest in

various ways (West & Zimmerman, 1991). However, the prevailing influence of a male and

female category on constraining one's potential should not be neglected as many parts of

society continue to adhere to these rigid norms (Gunnarsson, 2011). Bearing in mind the

broader scope of existing gender identities, this research predominantly focuses on this male–

female dichotomy to outline how these gender roles exert an influence on the individual. By

gaining more insights concerning the impact of this gender role dichotomy on the individual,

potentially findings could be generalized to ideally benefit all gender identities.

Until now, research has focused almost exclusively on the ways in which women are

harmed by gender roles. However, these recent developments open the stage to the ways in

which pressure to perform in masculine ways might be unproportionally harmful for men as

well. In this sense, the term *hegemonic masculinity* (Kupers, 2005, p. 716) implies how

power relations contemporarily influence society so that men are often seen as superior to women, and competition takes place among men. According to Kupers (p. 714), *toxic masculinity* defines one extreme of this and involves traits such as domination, competition, and the lack of emotional expression. This deficiency in showing emotions could relate directly to not seeking social support and a delay of psychological improvement due to this resistance (Good & Sherrod, 2001). Overall, men who score high on toxic masculinity embrace dominance and self-reliance as integral parts of their identity, despite potential negative effects on health. As an example, drinking alcohol might be regarded as a masculine activity and is often encouraged as an integral part of a male gender identity (Lemle & Mishkind, 1989). In fact, these implicitly positive attitudes towards alcohol consumption as part of one's identity have been established in men (Jajodia & Earleywine, 2003). Consequently, someone's gender role and how that person deals with challenging situations appear inextricably linked and can potentially operate in a dysfunctional way when psychological resources are sparse.

Gender and Life Stressors

A person's gender socialization shapes the way someone perceives the world and chooses to interact with it (Dedovic, Wadiwalla, Engert, & Pruessner, 2009). Whereas some situations appear less constrained by gender roles and gender stereotypes, in situations of stereotype threat the harm of salient gender stereotypes becomes particularly evident (Kiefer & Sekaquaptewa, 2007; Tellhed & Adolfsson, 2018). Consequently, the context determines to what extent gender roles and associated stereotypes exert an influence on observable behavior. According to Dedovic et al. (2009), the intensity of the stress response as indicated by the hypothalamus-pituitary-adrenal axis and subsequent coping mechanisms are linked to

the socially constructed nature of gender roles. This implies that the kind of stressor that men and women encounter as part of their gender socialization differs in the first place which manifests itself in different neuroendocrine systems. Consequently, this determines the distinctive activity in this axis, and therefore different coping responses are required by men and women. At the same time, this finding alluded to the fact that during life stressors the effects of gender roles seemed to be highly salient. In order to render this negative impact more comprehensible, current research concerning gender-specific coping mechanisms after life stressors is outlined in the following section.

Clinical Context

Posttraumatic stress disorder (PTSD), the clinical manifestation of the experience of a traumatic event, is globally on the rise (Hoppen & Morina, 2019). According to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM–5*; American Psychiatric Association, 2013, p. 271), PTSD belongs to the trauma- and stressor-related disorders and is composed of a set of symptoms associated with a traumatic event. In total, distinctive symptoms with individual differences in manifestation occur, namely re-experiencing, for instance, in the form of flashbacks or nightmares, avoidance of trauma triggers, negative affect, and changes in arousal. To obtain the diagnosis of PTSD, these symptoms must be present over the course of at least one month following the traumatic event and must impair the individual's level of functioning. In the course of a lifetime, PTSD affects approximately one out of seventeen people with women being twice as likely to develop PTSD (Frans, Rimmö, Åberg, & Fredrikson, 2005). This does not only pose a threat to society due to the extensive health care costs but also to the suffering individual. At the same time, the likelihood to develop comorbid disorders following PTSD increases (Mills, Teesson, Ross, & Peters, 2006).

High comorbidity levels exist between PTSD and substance use disorder (SUD). The diagnosis for SUD in the *DSM–5* is given on a continuum from mild to severe and is tied to the specific substance; however, the diagnostic criteria overlap across substances (American Psychiatric Association, 2013, p. 484). Regardless of the substance, the substance use must impede functioning, and physical or psychological withdrawal symptoms must occur in order to be diagnosed with SUD. In a sample of people suffering from PTSD, the prevalence of SUD was approximately one third (34%) across all substances and about one quarter (24%) for alcohol use disorder alone, making it the most frequently reported SUD. Therefore, it is five times as likely for a person to simultaneously suffer from a SUD if PTSD is present (Mills et al., 2006). This renders SUD one of the most prevalent co-occurring disorders next to PTSD and stresses that the concurrent presence of both psychopathologies should be considered in treatment. Even though prior SUD might increase the exposure to high-risk situations and heighten the likelihood of developing PTSD subsequently, PTSD mostly precedes SUD (Chilcoat & Breslau, 1998). This suggests that sufferers from PTSD seem to use substances to achieve relief from the trauma symptoms.

In terms of the present study, the focus lies on behavior patterns that imply compensatory mechanisms in the realm of emotion regulation by substances. Previously, researchers claimed that substances including alcohol might be used to self-medicate the hyperarousal and avoidance symptoms in PTSD (Bremner, Southwick, Darnell, & Charney, 1996; Chilcoat & Breslau, 1998). This notion is in line with the *self-medication hypothesis* which states that substances are used to regulate disturbing emotional states so that emotional stability is regained (Khantzian, 2003, p. 47). Moreover, it fits in well with the tendency that men rely on distraction from stressors disproportionally more than women do (Lynch, Kashikar-Zuck, Goldschneider, & Jones, 2007). Therefore, self-medication offers a

reasonable link to explain the coexistence of these conditions because it can be an attempt to escape from the burden of the trauma.

Trauma Research in the General Population

These definitions of PTSD and SUD depend on a clear cutoff to obtain a diagnosis even though similar behavioral patterns might arise regardless of the presence of a diagnosis. Therefore, research with a nonclinical sample could provide new insights into coping strategies which could subsequently be used to draw inferences in terms of a clinical sample as well. A large-scale study in Sweden tentatively pointed to a considerable degree of traumatization in the general population by assessing 1,800 randomly selected participants (Frans et al., 2005). A vast majority (80%) experienced at least one traumatic event in their lifetime with the most commonly reported trauma being traffic accidents. In order to investigate these potentially traumatic events in a general population, the Life Stressor Checklist–Revised (LSC–R; Wolfe, Kimerling, Brown, Chrestman, & Levin, 1996) includes some life stressors with a low barrier to entry which presumably some people might have encountered. Therefore, the LSC–R is a successful tool to encompass nonclinical traumatization as it bypasses the concern to otherwise exclusively address a clinical sample. This underlines the scope of the traumatic burden even at levels that do not warrant a clinical diagnosis.

One of the most remarkable findings by Frans et al. (2005) concerned factors that facilitated the development of PTSD also in a nonclinical sample. Among these factors, the kind and intensity of the traumatic event, and the perceived level of distress were outlined. In particular, the latter differed between men and women as women displayed more distress during the traumatic event. This could serve as an explanation for the high prevalence for

PTSD among women. Despite the insights gained through this research, several questions remained unanswered as explanations for these gender differences have not yet been discussed adequately.

Gender-Specific Vulnerability

Despite these high levels of comorbidity, questions concerning possible gender-specific vulnerabilities to trauma arise, given the fact that PTSD sufferers are predominantly women and SUD sufferers are more often men (McHugh, Votaw, Sugarman, & Greenfield, 2018). In this sense, Frans et al. (2005) illustrated that women were twice as likely as men to experience PTSD symptoms. As a result of a greater tendency for women to ruminate and for men to apply distraction instead, it appears reasonable that the effects of trauma are more visible in women (Lynch et al., 2007; Nolen-Hoeksema & Jackson, 2001). Additionally, the finding that men experienced trauma less intensely than women did might be reinforced by underreporting as men tried to cope with the negative experience independently and were reluctant to seek support (Allen & Gordon, 1990). Therefore, even though the effects of life stressors on women are well reported, less is known about the underlying mechanisms of trauma in men which could partly be due to these unrecorded cases. Potentially, an inspection of the societal gender roles and how these alter coping responses could open new perspectives. Before discussing this in greater detail, gender-specific experiences of trauma are elaborated on in order to serve as a foundation.

Difference in kinds of traumatic events. It has been discussed whether the traumatic events in the first place differ between men and women. A vast amount of research was conducted on both male and female veterans who experienced military sexual trauma which often co-occurs with PTSD. It was found that among those who suffer from both conditions,

men were more likely to comorbidly develop SUD whereas for women a comorbid diagnosis of depression, an anxiety disorder, or an eating disorder prevailed (Maguen et al., 2012). In a similar vein, Perrin et al. (2014) revealed that, even though men and women encountered a similar number of traumatic events throughout their lives, the kind of traumatic event was of importance. Maguen et al. (2012) found that women with PTSD were more likely to have experienced sexual trauma (31%) than men with PTSD (1%). Controlling for the higher likelihood of sexual assault for women canceled this gender difference in PTSD prevalence. Therefore, this distinctive effect of the kinds of traumatic events that have been encountered must be considered in order to comprehend the difference in coping by men and women.

   Difference in peritraumatic experience. Another approach is to examine the immediate reactions to the trauma. According to Irish et al. (2011), this heightened risk for women to develop PTSD might be a result of distinct peritraumatic experiences in terms of different physiological and psychological immediate responses to trauma. For instance, they highlighted that peritraumatic dissociation—a distortion in the perception of time, location, and the person themselves during the trauma—was stronger in women compared to men. This form of dissociation affected the quality of memory consolidation of the event itself and, therefore, an inability to process and resolve the trauma adequately in a treatment process (Koopman, Classen, & Spiegel, 1994). One of the underlying reasons suggested by Frans et al. (2005) was that the level of distress related to the traumatic event experienced by women was greater than for men. This implied that certain neurobiological differences might exist that made trauma more likely to be impactful for women. In line with this notion, Seidlitz and Diener (1998) demonstrated the adverse effect of this distress on emotional memory and how this disproportionally affected women.

Difference in coping mechanisms. Despite these gender differences in the initial stages of the traumatic exposure, the associated coping mechanisms also exert an influence on how the trauma manifests. One of the factors accounting for the gender difference in prevalence of PTSD mentioned by Simmons (2007) concerned the socially constructed nature of gender roles. More explicitly, she claimed that women face stressors that are inextricably linked to their gender role crystallized around caring about a family and prioritizing others' needs over their own. As these gender roles are embedded in a societal context, opportunities to question rigid gender roles and subsequently intervene in them arise.

To tackle the impact of the traumatic events, coping mechanisms may function to relieve symptoms in the short- or in the long-term. It is common practice to distinguish between problem-focused and emotion-focused coping strategies with research finding that men tended to rely more on the former and women more on the latter (Araya, Chotai, Komproe, & de Jong, 2007; Lazarus & Folkman, 1984). However, this does not fully represent the complex nature of coping strategies. As a more comprehensive approach, Carver (1997) outlined several coping mechanisms which ranged from inefficient ones such as substance use and avoidance to efficient ones such as active coping, emotional support, and acceptance. Strikingly, discrepancies prevail concerning the effect of age on coping as it has remained unclear to what extent age posed different challenges or predisposed one to choose distinct coping responses (Aldwin, Sutton, Chiara, & Spiro, 1996; Diehl, Coyle, & Labouvie-Vief, 1996; Folkman, Lazarus, Pimley, & Novacek, 1987; Wortman & Silver, 1993). However, coping resources such as perceived social support appeared to function as a mediator between change in coping strategy and age (Trouillet, Gana, Lourel, & Fort, 2009). Additionally, Cramer (1991) stated that the gender difference in coping intensified as people grew older.

For the interest of this research, the dimension of emotional support from others as opposed to numbing pain by means of substances appears noteworthy. Current research stressed repeatedly that social support reduced the negative impact of the traumatic event and might even serve as the moderator between posttraumatic growth and psychopathologies (Han et al., 2019). Overall, women tended to cope more than men by aid of social support and were often not as reluctant to search for professional help (Allen & Gordon, 1990; Good & Sherrod, 2001). This gender difference could be observed in terms of emotional social support whereas instrumental social support—defined as seeking advice and mutual problem-solving—did not seem to differ by gender (Ashton & Fuehrer, 1993). This reluctance of men to seek emotional social support could transfer to delaying successful treatment response. Even on a nonclinical scale, the lack of emotional support led to increased suffering and feelings of helplessness compared to those who accepted reliance on social networks (Frans et al., 2005). Up to now, this propensity in men to be reluctant to seek social support has not yet been examined in relation to life stressors nor connected to underlying gender roles.

In contrast to women's tendency to seek social support, men tend to apply avoidant coping and use substances to compensate and offer relief from trauma. Maguen et al. (2012) found that the likelihood to develop a comorbid SUD was higher for men than for women who mostly showed a different comorbidity profile. In line with the self-medication hypothesis, this could represent the attempt to deal with the problems self-sufficiently, in particular for men. Alongside the notion that social support counts as an effective coping mechanism, the distinctive profile that men tend to use substances more than women as an inefficient coping mechanism requires further evidence from research with a general population. Prior research revealed that gender differences in coping behavior exist (Frans et al., 2005; Irish et al., 2011; Maguen et al., 2012; Olff, Langeland, Draijer, & Gersons, 2007)

but failed to pinpoint comprehensively why. Previously, qualitative research using case studies explored the differential narratives by men and women after trauma and established linkages to their respective gender socialization (Krause, DeRosa, & Roth, 2002). This implies that the acquired gender roles shape the way one reacts to traumatic events. Moreover, Norris, Perilla, Ibañez, and Murphy (2001) figured out that these gender differences were more prominent in cultures that fostered traditional and stereotypical gender roles. Therefore, quantitative methods are needed to complement these linkages to establish how coping differs by gender and, in a next step, how these coping mechanisms fit into the societal gender role.

Complementary Methods

To counteract implicit biases, people may engage in cognitive control to consciously suppress their initial impulse and behave contrary to their implicit attitudes (Perugini, 2005). Nevertheless, these implicit biases often operate unconsciously and have negative consequences (Greenwald & Krieger, 2006). Therefore, bringing these hidden forces to the foreground could open a window of opportunity for change. For this purpose, the Implicit Association Test (IAT) was developed and succeeds in unmasking subtle linkages in associations (Greenwald, McGhee, & Schwartz, 1998). By combining items in distinct ways, the difference in reaction time in varying trials is used to infer the implicit attitude. However, a few scholars criticized the psychometric properties of the IAT, for instance, the categorization into distinct association strengths with limited scientific backbone as to what these differences imply (Blanton & Jaccard, 2006). Moreover, it was debated to what extent it is feasible to exclusively capture personal attitudes without taking the external influences such as circumstances and the setting of the IAT into account (Fazio & Olson, 2003). Nevertheless, the benefits of the IAT outweigh the drawbacks, regarding its high predictive

validity and its potential to unmask implicit biases (Greenwald, Nosek, & Sriram, 2006; Greenwald, Poehlman, Uhlmann, & Banaji, 2009). As a practical example, the tendency to implicitly associate science more with men than with women affected academic achievements in women in science-related subjects (Nosek et al., 2009). Recently, Greenwald, Banaji, and Nosek (2015) added to this that even small statistical significance in the IAT manifested in entirely different behavior, thereby stressing the potential of the IAT.

On the contrary, explicit measures such as the Bem Sex Role Inventory (BSRI; Bem, 1974) serve to assess attitudes in a straightforward manner and often take the form of self-reports. Thereby, however, explicit measures might run the risk of social desirability effects whereas the superiority of the IAT lies in bypassing conscious control and social desirability (Greenwald et al., 2002). At the same time, a meta-analysis revealed that correlations between implicit and explicit self-report measures were only moderate (Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005). In the same vein, Perugini (2005) revealed that different transfer models existed between implicit and explicit measures. This highlighted again that the transfer from implicit biases to observable explicit behavior was not straightforward, and interventions could benefit from unmasking this link. In order to gain a comprehensive image of gender roles, a combination of implicit and explicit measures could balance out each other's shortcomings.

Gaps in Knowledge

Even though women apply healthier coping strategies such as social support and men instead tend to use substances, women continuously suffer from PTSD at a higher rate. Despite this ostensive contradiction, biological differences could explain that women are more likely to experience higher stress levels (Frans et al., 2005) and engage in rumination

more frequently than men (Nolen-Hoeksema & Jackson, 2001). In addition, the tendency to seek social support does not necessarily help because this could also cause more interpersonal stressors, becoming the source of additive prospective trauma (Gore, Aseltine Jr, & Colten, 1993). Therefore, the possibility arises that an overreliance on this coping strategy could backfire and be responsible for the greater manifestation of PTSD in women than in men. All these together could lay the foundation for an equivalent to toxic masculinity applicable to femininity on the other extreme side of the spectrum. Moreover, the potential underreporting of trauma in men caused by failing to seek social support leaves a greater grey area and an inflated rate of PTSD in women compared to men (Gavranidou & Rosner, 2003).

Concerning the methodology, a gender bias might be inherent to the applied methods that rendered women more likely to report and be diagnosed with PTSD than men (Simmons, 2007). More specifically, this methodological gender bias concerns the diagnostic criteria for PTSD in the *DSM–5* (Kornstein, 2010) as well as convenience sampling procedures that are disproportionally taking advantage of women's tendency to report symptoms (Hartung & Widiger, 1998). On average, life stressors appear to be encountered by men and women with a comparable frequency in the general population (Perrin et al., 2014). Therefore, a focus on a nonclinical sample could offer novel insights, and findings could potentially be extrapolated to the clinical domain afterwards. Moreover, previous studies were overly focused on gender differences and might erroneously neglect seeing masculinity and femininity on a continuum. Highlighting this, Ginsburg and Silverman (2000) demonstrated that participants with more masculine traits, regardless of the gender, possessed a decreased likelihood of developing PTSD. Therefore, it seems important to disentangle the effect of gender socialization on coping instead of merely inspecting the dichotomy of male or female.

To bridge the gap, the self-medication hypothesis could offer a plausible explanation as to why one uses substances following trauma. However, this does not yet reveal why men and women cope differently with traumatic experiences. As a higher level explanation for these differences, social role theory could be used as it can be assumed that the societal upbringing also plays a crucial role in this (Eagly & Wood, 2012). In particular, the implicit attitude of seeing men as emotionally self-sustaining results in a reluctance to seek help, if needed. It appears reasonable that men who score high on toxic masculinity rely more on self-medication at the expense of seeking professional help than those who do not exhibit these traits. Balancing implicit and explicit measures could offer a crucial window of opportunity for comprehending the effect of acquired gender roles on coping mechanisms, thereby achieving therapeutic change and potential relief from the burden of potentially traumatic life stressors for the general population.

Research Questions and Hypotheses

As a result of previous research and the lack of addressing mechanisms influenced by gender socialization, the following research question arose: To what extent do socially constructed gender differences serve as an explanation for the distinct manifestation of disorder comorbidity and patterns of coping mechanisms for men and women with traumatic experiences on a nonclinical level? Based on this research question, this study arrived at the following hypotheses. Firstly, men are less likely to seek emotional social support following life stressors than women. Secondly, men are more likely than women to use substances after life stressors to self-medicate. Thirdly, in line with the notion of toxic masculinity and social role theory, these effects are expected to be more extreme with a stereotypically masculine implicit self-concept than with a stereotypically feminine one. In addition, this novel variable

composed of the implicit gender self-concept is expected to prove superior to the original male–female distinction in determining the coping mechanism following life stressors.

Method

General Design

To investigate this research question concerning the mechanisms behind gender differences in coping following life stressors, a study was set up combining predictions from the self-medication hypothesis with social role theory and toxic masculinity. Several established measures were brought together to clarify the interconnections between these concepts. In this sense, the applied coping strategy in the form of social support or substance use served as the dependent variable whereas gender, age, the degree of traumatization, and the output from the implicit and explicit measures were the independent variables. The entire study was conducted in an online questionnaire accessible through a shareable link. This questionnaire was created using the software Qualtrics (Qualtrics Inc, 2013).

The study adhered to the ethical criteria outlined by the Swedish Research Council, and ethical approval was obtained before the study commenced. All collected data were treated confidentially and anonymously which meant that no identifiable data were collected that could be traced back to the individual participant. Moreover, participants provided their informed consent to participate in this study. The study consisted of two stages and combined existing measures in a within-subject design. First, a set of questionnaires investigated the participants' degree of prior traumatization and coping mechanisms that were applied to the event that was subjectively perceived as most disturbing. Second, the participants' implicit and explicit gender attitudes were examined in an experimental design.

Participants

The sample recruitment took place through personal networks by sharing an online link via social media. For the sake of warranting representativeness and improving generalizability, spreading the link outside of university was encouraged to circumvent the homogeneity of exclusively students as a sample. Based on an inspection of related research projects, a power analysis by means of the software G*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007) suggested to aim for recruitment of approximately 50 participants in each group to detect a medium effect size ($d = .50$) in the difference between the group means. Taking potential discontinuation and therefore incomplete data collection into account, approximately 150 participants were aimed at. Due to the sensitivity of the trauma-related aspects, only people aged 18 and over could participate in the study. This within-subject design required a roughly balanced proportion of men to women to be able to draw inferences. As an indirect compensation mechanism, the value of the participants' contribution to research within psychology was emphasized.

Initially, 261 responses were recorded of which, however, several participants had to be excluded due to substantial missing data ($n = 129$). To clarify this progression of sample reduction and data cleaning, Figure 1 can be inspected as it outlines the exclusion criteria of the exact number of participants in order of the deletion. Following this data cleaning, the remaining sample consisted of 132 participants ($M_{age} = 25.74$, $SD_{age} = 6.93$, age range: 18–74) with 64 men ($M_{age} = 26.34$, $SD_{age} = 8.75$, age range: 20–74) and 68 women ($M_{age} = 25.18$, $SD_{age} = 4.60$, age range: 18–51). This could be considered a sufficiently balanced sample regarding the ratio of men to women. In total, 32 different nationalities were represented in the study.
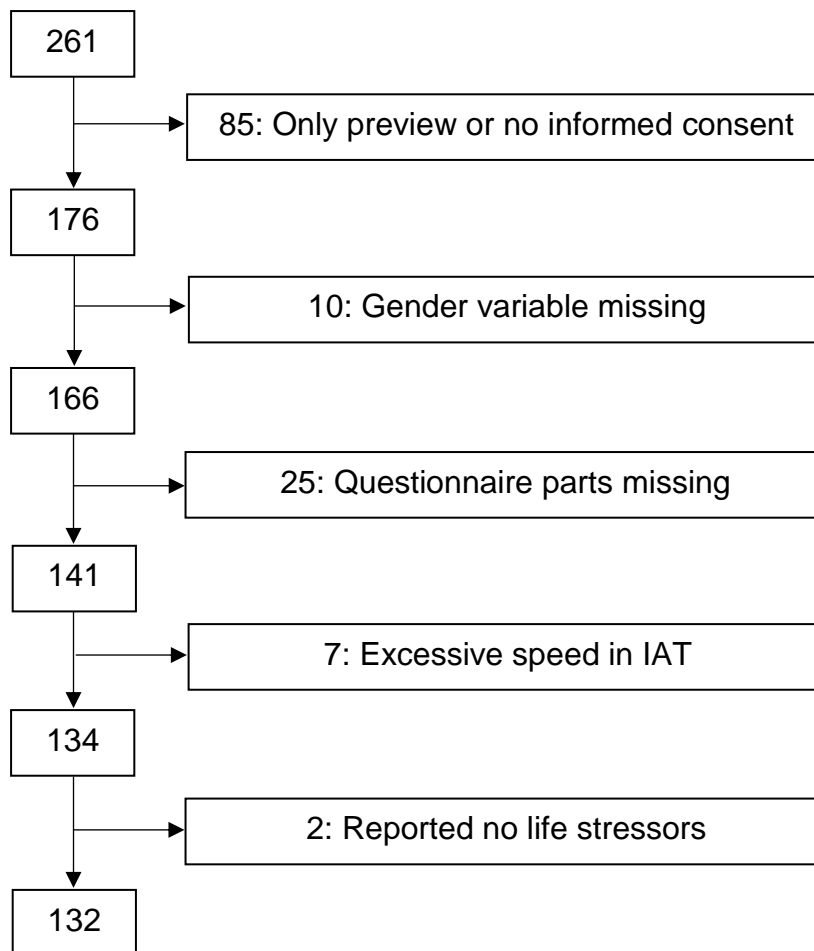
Figure 1. Flow chart of data cleaning of sample size. This figure demonstrates which criteria led to the exclusion of how many participants. IAT = Implicit Association Test.

Materials

  Life Stressor Checklist–Revised. To gain an overview of the degree of traumatization that the participants had experienced throughout their lives, the Life Stressor Checklist–Revised (LSC–R; Wolfe et al., 1996) was administered. This original version of this self-report measure determines the presence of 30 stressful life events such as deaths of significant others or sexual assault. As an example, the LSC–R included questions such as "Did your parents ever separate or divorce while you were living with them?" All questions were followed by a dichotomous response option of yes/no. In addition, one of the final questions of the LSC–R asked if additional life stressors not covered by the questionnaire

have been experienced with the option to describe the event. Within this, the anonymity and confidentiality of the information was reassured again. For all questions, follow-up questions such as "How much has this affected your life in the past year?" examine details and the setting of the traumatic event in the original LSC–R. As these follow-up questions contain information that was not needed for this study, they were not included in this questionnaire. Moreover, a few conceptually similar questions were combined, and those specifically addressing people under the age of 16 were removed as the present sample only includes people aged 18 and above. Subsequently, 20 questions remained in the finalized version of the LSC–R used in the present study.

COPE Inventory. The COPE Inventory (Carver, Scheier, & Weintraub, 1989) originally consists of 60 items which assess 15 coping dimensions. In line with the purpose of the present study, only the items assessing the propensity to seek emotional social support and to use substances were relevant to assess the hypotheses. Therefore, emotional social support as a reference to the first hypothesis was inspected with four items, for instance, "I've been trying to get advice or help from other people about what to do." Hereby, the questions concerning instrumental social support were not considered on purpose because prior research specifically pointed at exclusively emotional social support as a distinctive factor between men and women (Ashton & Fuehrer, 1993). Moreover, four questions were chosen to test the second hypothesis related to the propensity to self-medicate such as "I've been using alcohol or other drugs to help me get through it." These items on the substance use scale of the COPE Inventory directly referred to drinking alcohol or taking drugs, thereby encompassing different means of substance use. In order to mask the aim of the study, four additional distractor items were chosen from the scale belonging to four distinct coping

dimensions. All items were measured on a 4-point Likert scale ranging from 1 (*I don't do this at all*) to 4 (*I do this a lot*).

Implicit measure. In order to assess the implicit self-concept in terms of gender, an IAT (Greenwald et al., 1998) was performed in the subsequent step of the online questionnaire. The IAT was generated with the aid of Qualtrics (Qualtrics Inc, 2013) and the internet application *iatgen* which allowed to customize the IAT to the study's needs and to incorporate it into an online survey (Carpenter et al., 2018). It was inspired by the *Project Implicit* launched by Harvard University (Nosek, Banaji, & Greenwald, 2019). For the purpose of this study, the self-concept IAT was applied using the Self–Other category as well as stereotypically masculine versus stereotypically feminine traits. This self-concept IAT intended to reveal which of two constructs was more integral to the self-concept of the individual (Greenwald et al., 2002).

After the first practice trials to rehearse the attribute discrimination, the actual experiment began by combining the categories in one of the linking possibilities. For instance, the categories stereotypically masculine and self-related words were linked on the left-handed key, and stereotypically feminine and other-related words were linked on the right-handed key. Then the instructions shifted to represent a reversed combination, and the difference in reaction time in these critical trials was recorded. The direction of reversal of the combined tasks and the order of the blocks of the IAT was counterbalanced between participants so that the order of items could not exert an influence on the relationship between variables. In total, the IAT was composed of seven consecutive blocks with different trial lengths. Table 1 depicts the arrangement and the experimental design of the IAT used in this study.

Table 1

Description of the IAT Procedure

Blocks	1	2	3	4	5	6	7
Function	Practice	Practice	Practice	Critical	Practice	Practice	Critical
Trials	20	20	20	40	20	20	40
Left key	S	F	S + F	S + F	M	S + M	S + M
Right Key	O	M	O + M	O + M	F	O + F	O + F

Note. IAT = Implicit Association Test; S = self; O = other; M = stereotypically masculine; F = stereotypically feminine.

A brief pilot study was conducted to test for the face validity of the potential IAT items representing specific words in the stereotypically feminine versus masculine category. A gender-balanced sample of 13 participants filled out a brief online questionnaire. The aim was to find words that were representative of the concept while simultaneously being easy to understand and suitable for an IAT. Table 2 illustrates the final words that the pilot study yielded as most representative for the stereotypically masculine versus stereotypically feminine domain, respectively. In this way, the valence of the words seemed evenly distributed in terms of the inclusion of negatively connoted words such as *aggressive* or *weak* in each category. Another benefit of these words was that they succeeded in their ease of comprehensibility across various levels of English proficiency.

As a result of the IAT, the implicit self-concept in terms of gender stereotypes could be inferred. The underlying assumption was that it takes longer to respond in a counterintuitive way than in a way congruent with one's implicit attitudes (Greenwald et al., 1998). Due to the major importance of reaction times here, the instructions specifically

encouraged to be as fast as possible while maintaining accuracy. Therefore, immediate

feedback concerning the accuracy of their response was provided by showing a red cross on

the screen in the case of an incorrect response and the need to react to that by pressing the

correct key. In line with the interpretation of Gustafsson and Björklund (2008), a positive

IAT effect indicated a more pronounced association of oneself with stereotypically

masculine, thereby demonstrating a more stereotypically masculine self-concept. On the

contrary, a negative IAT effect exposed the reverse pattern. The IAT itself took about five

minutes, and is considered the most validated measure to examine implicit attitudes across

various domains (Greenwald et al., 2002; Nosek et al., 2009).

Table 2

Items of the Self-Concept IAT Following the Pilot Study

Self		Gender Stereotypes	
Self	Other	Masculine	Feminine
I	You	Powerful	Caring
Me	Their	Strong	Weak
Mine	Them	Aggressive	Understanding
Myself	Your	Dominant	Soft

Note. Previous research built the inspiration for the Self–Other words (Gustafsson &

Björklund, 2008) and the gender stereotypes (Bem, 1974). IAT = Implicit Association Test.

Explicit measure. In order to gain additional insights in terms of previously outlined

discrepancies between implicit and explicit attitudes (Hofmann et al., 2005), the same

stereotypically masculine and stereotypically feminine words as in the self-concept IAT were

assessed separately in an explicit manner as well. This procedure followed the BSRI (Bem,

1974) and relied on some of the words inherent to the BSRI as well. For the sake of time-efficiency and consistency, not all BSRI items but only those items that were also assessed in the IAT previously were assessed. Even though the pilot study revealed a few words that are not part of the original BSRI such as *weak*, *soft*, *caring*, and *powerful*, the semantic proximity to the existing items legitimated the usage of the BSRI scale of response options. Hereby, only items that loaded onto the masculinity and the femininity score were considered. Concerning the instructions, the participant was asked to provide a rating on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*), bearing in mind to what extent the word described themselves.

Procedure

The investigation took place online through a link that granted participants access to the questionnaire on their computer. First, participants provided their informed consent by agreeing to participate to the study and acknowledging that they understood the information about the main purpose of the study at the beginning of the questionnaire (see Appendix). Within this, they were notified about the procedure, purpose, length, and confidentiality of the study, and that they were free to terminate participation at any point without the need to justify this.

As a next step, the study covered demographic data in terms of the participant's identified gender (male, female, other, prefer not to say), age, and nationality. The actual study then commenced and proceeded as outlined in Figure 2. As participants were asked to consider the event they perceived as most disturbing when answering the LSC–R questions, this prime increased the salience of the life stressor and made the coping responses more targeted which was in line with the procedure applied by Frans et al. (2005). For a detailed

review of the questionnaire, the Appendix contains all instructions and the composition of the
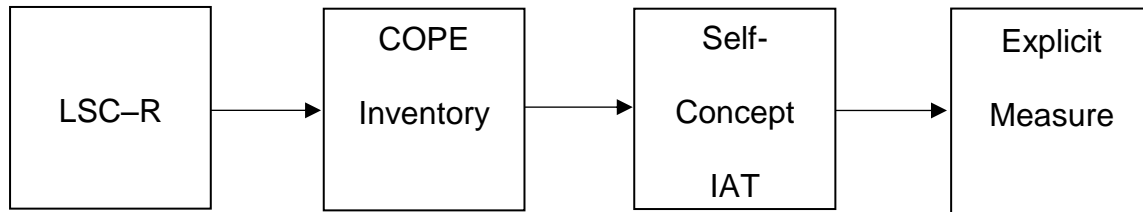
questions used in the present study.

Figure 2. Sequence of tasks. This figure shows the order of components of the study. LSC–R

= Life Stressor Checklist–Revised; IAT = Implicit Association Test.

Each participant only needed one assessment; therefore, the risk of discontinuation

was minimized even though participants were free to terminate the study at any point.

Altogether, the entire battery of tests required approximately 12 minutes to complete. At the

end of the questionnaire, the participants were thanked for their participation and were

encouraged to seek professional help if necessary (see Appendix). Due to the mentally taxing

nature of the subject matter, this final encouragement could lessen possible negative mental

health consequences. Additionally, contact details of the researcher and her supervisor at the

department were provided in case any further questions arose.

Data Analysis

To analyze the data, the Statistical Package for the Social Sciences (Version 22) was

employed. In addition, the internet application iatgen provided a so-called D-score per

participant next to several other measures such as significance or reliability of the specific

IAT (Carpenter et al., 2018). Concerning reliability and internal consistency, two mutually

exclusive parts of the test were correlated. Hereby, the split-half Spearman-Brown correction

(De Houwer & De Bruycker, 2007; Glashouwer, Smulders, de Jong, Roefs, & Wiers, 2013)

estimated a high reliability for this IAT (r_{sb} = .86). As reliabilities of IAT procedures usually

range from .70 to .90 (Hofmann et al., 2005), the reliability in the present study proved to be

particularly high which shows that this measure obtains similar results in a consistent manner.

Inherently incorporated into the iatgen analysis, default settings concerned potential

dropout criteria. For instance, responding overly fast or slow led to the exclusion of

participants because an adequate usage of the IAT could not be guaranteed this way. Hereby,

participants that exceeded 10,000 ms or that responded too fast, measured as the reaction time

of one tenth of the trials taking less than 300 ms (Greenwald, Nosek, & Banaji, 2003), were

not considered. Another default concerned the error rate. However, as the present study

required participants to correct errors no additional error penalty concerning supplementary

latencies was included (Greenwald et al., 2003).

In order to compute the D-scores, trial three, four, six, and seven were essential. In

this way, the difference between critical blocks and practice blocks could be computed and

subsequently divided by the pooled standard deviation of that respective trial. After weighing

these D-scores equally, they were used indicatively for further analyses. After these

preliminary analyses, the D-scores were combined with the remaining scores of the

questionnaire per participant. In case of missing values, these were found to be missing

completely at random as no link between the missing items and the pattern of results for the

respective participant could be established. Therefore, the substitution with the mean of that

variable proved to not confound the original data so that this procedure was applied to the ten

missing values.

Subsequently, variables were created to represent the constructs appropriately. Due to the nonclinical nature of the sample, potential traumatization was treated as a continuous variable instead of defining a cutoff for a diagnosis. Regarding coping mechanism, even though the items within one scale seemed to evoke slightly distinct responses, the internal consistency for the social support scale with four items ($\alpha = .90$) and the substance use scale with four items ($\alpha = .95$) was high. This implies that they reliably assessed the same underlying construct so that it was warranted to proceed with mean composite score as the main two dependent variables. The four items chosen for distraction purposes were not considered in the subsequent analysis. Based on the scoring of the COPE Inventory from 1 (*I haven't been doing this at all*) to 4 (*I've been doing this a lot*), a higher score entailed a greater likelihood to apply the respective coping strategy. In accordance with the frequent practice of IAT breakpoints, the participants were categorized into possessing none, slight, moderate, or strong strengths of association, respectively. Based on the criticism that these breakpoints might be deemed overly arbitrary (Nosek et al., 2009), another dichotomous variable was created, exclusively representing a stereotypically masculine versus a stereotypically feminine self-concept. In this way, the juxtaposition of this variable with the original identified gender variable was facilitated.

An analysis of variance (ANOVA) compared the values between male–female and masculine–feminine self-concept on the respective coping measures. Depending on the influence on the dependent variable, the degree of traumatization as measured by the LSC–R might serve as a control variable because more traumatization might warrant the application of more extreme coping strategies. Moreover, a test examined whether age should be held constant as coping mechanism were found to differ across distinct age groups (Trouillet et al., 2009). Nevertheless, no common ground was found concerning the effect of age on coping

(Aldwin et al., 1996; Diehl et al., 1996; Folkman et al., 1987; Wortman & Silver, 1993). Moreover, age seemed to be a strong moderator on gender stereotypes (Lopez-Zafra & Garcia-Retamero, 2012). However, no significant difference in age or LSC–R score on coping or the implicit self-concept was detected within this sample. Consequently, no control variables were included, and a regular ANOVA was performed instead of an analysis of covariances. To reveal which predictor accounted for more variance in the sample, two linear regression equations were formulated that juxtapose the two predictors, namely gender and implicit self-concept. Based on previous research, significant differences were expected and measured by a significance level of $\alpha = .05$.

Prior to the critical analyses, the model assumptions were tested. A boxplot revealed no outliers in the mean score of coping with social support but four outliers in the mean score of coping with substance use. A nonparametric test (Mann-Whitney U) was juxtaposed and reached the same result as its parametric equivalent. As an investigation of the data without these outliers revealed no difference as well, these outliers were deemed noninfluential and remained as real values in the analysis. Even though plots revealed a slight deviation from normality in the dependent variables, the fact that the sample was sufficiently large warranted that the assumption of normality was still adequately met. Concerning homoscedasticity, the Levene's test reached significance for the dependent variable of coping with social support, $F(1, 130) = 6.55$, $p = .012$, and substance use, $F(1, 130) = 10.41$, $p = .002$, implying that the assumption of equal variances might not have been met. Therefore, equivalent test measures to the ANOVA that are robust to heteroscedasticity such as the Brown-Forsythe test were used. Apart from this, the remaining assumptions were adequately met in order to proceed with the analyses.

Results

Degree of Traumatization

A vast majority of the sample has encountered at least one of the mentioned life stressors (99%) prior to the exclusion of those without any life stressors ($n = 2$). The participants have on average encountered five ($M = 5.02$, $SD = 2.57$) life stressors out of the twenty listed. The most frequently reported life stressor was that someone close died ($n = 94$), followed by that one of the life stressors happened to a significant other with the participant being affected by this ($n = 77$). Despite no significant difference between men ($M = 4.80$, $SD = 2.65$) and women ($M = 5.24$, $SD = 2.50$) in the amount of experienced life stressors, $F(1, 130) = 0.96$, $p = .330$, $\eta_p^2 = .01$, a differential pattern arose when considering specific life stressors. For instance, significantly more women ($n = 31$, $M = 0.46$, $SD = 0.50$) than men ($n = 9$, $M = 0.14$, $SD = 0.35$) were subject to sexual harassment, $F(1, 130) = 17.32$, $p < .001$, $\eta_p^2 = .12$. By contrast, the pattern was reversed regarding physical attacks with significantly more men ($n = 30$, $M = 0.47$, $SD = 0.50$) having experienced this life stressor than women ($n = 14$, $M = 0.21$, $SD = 0.40$), $F(1, 130) = 10.56$, $p = .001$, $\eta_p^2 = .08$.

Coping Mechanisms

Social support. At the outset, the individual four items of each coping dimension were examined. As the Levene's test did not reach significance with the individual social support items, the procession with a regular one-way ANOVA was justified. Table 3 presents the ANOVA of gender differences on each of the individual items of the emotional social support scale of the COPE Inventory. Even though only one item showed a significant difference in the social support scale, the high internal consistency legitimated the assumption that the items similarly captured the underlying construct. Therefore, the composite mean score for emotional social support was focused on in the following.

Table 3

ANOVA for the Effect of Gender on the Emotional Social Support Scale

Item	df	F	Sig.	η_p^2
I discuss my feelings with someone.	1, 130	2.67	.105	.02
I try to get emotional support from friends or relatives.	1, 130	5.23	.024	.04
I get sympathy and understanding from someone.	1, 130	3.34	.070	.03
I talk to someone about how I feel.	1, 130	3.63	.059	.03

Note. Items were taken from the COPE Inventory (Carver et al., 1989). ANOVA = analysis of variance.

Considering this mean score of emotional social support, participants reported to rely on this strategy to a medium amount ($M = 2.63$, $SD = 0.86$), irrespective of identified gender. Regarding age as a control variable, an ANOVA for the effects of age on coping with social support did not reach significance, $F(19, 112) = 1.25$, $p = .236$, $\eta_p^2 = .17$. In the same vein, the level of traumatization also did not reach significance, $F(18, 113) = 0.93$, $p = .549$, $\eta_p^2 = .13$. Therefore, neither age nor the score obtained from the LSC–R were controlled for within this analysis. An ANOVA was performed to assess the first hypothesis that the propensity to seek social support differs by gender with women being more likely to rely on social support. As a result of the ANOVA, including the Brown-Forsythe test correction with adjusted degrees of freedom, a significant difference could be found between men ($M = 2.46$, $SD = 0.77$) and women ($M = 2.79$, $SD = 0.91$) in the amount of reporting social support as a coping mechanism, $F(1, 128) = 4.89$, $p = .029$, $\eta_p^2 = .04$, with women seeking more social support than men.

Substance use. Regarding the propensity to use substances, the variances were deemed unequal based on a Levene's test for three of the four items. Consequently, the ANOVA, including the Brown-Forsythe correction for these three items, yielded a significant difference between men and women on all items (see Table 4). Due to the significant findings and the high internal consistency of the substance use scale, the mean could adequately represent the individual items.

Table 4

ANOVA for the Effect of Gender on the Substance Use Scale

Item	Df	F	Sig.	η_p^2
I use alcohol or drugs to make myself feel better.	1, 130	4.32	.040	.03
I try to lose myself by drinking alcohol or taking drugs.[a]	1, 116	4.84	.030	.04
I drink alcohol or take drugs, in order to think about it less.[a]	1, 117	4.94	.028	.04
I use alcohol or drugs to help me get through it.[a]	1, 108	6.58	.012	.06

Note. Items were adapted from the COPE Inventory (Carver et al., 1989). ANOVA = analysis of variance.

[a]The Brown-Forsythe correction with adjusted denominator degrees of freedom was used with those items that were significant in a Levene's test.

Regarding engagement in substance use, the total sample on average responded with the response anchor *I do this a little bit* ($M = 1.62$, $SD = 0.83$). As in the previous analysis, the effect of age and level of traumatization on coping were tested as potential control variables. In this analysis, age did not lead to a significant difference in the usage of substances to cope with life stressors, $F(19, 112) = 1.04$, $p = .418$, $\eta_p^2 = .15$, which is why it was not necessary to use age as a control variable in further analyses. Similarly, the mean

count of life stressors also did not introduce a significant difference on the dependent variable, $F(18, 113) = 1.30$, $p = .202$, $\eta_p^2 = .17$, so that the mean LSC–R score was also not held constant in the following. An ANOVA with the Brown-Forsythe test correction, including adjusted denominator degrees of freedom to account for the unequal variances, revealed a significant difference between men ($M = 1.80$, $SD = 0.94$) and women ($M = 1.45$, $SD = 0.67$), $F(1, 113) = 5.94$, $p = .016$, $\eta_p^2 = .05$, with men using substances more than women as a means of coping.

Implicit Self-Concept

Unlike the identified gender variable, the implicit self-concept was based on the D-score retrieved from the IAT which represented an underlying stereotypically masculine or stereotypically feminine self-concept. The total sample yielded a D-score ($M = -0.25$, $SD = 0.46$) which demonstrated an implicit bias in the association with a stereotypically feminine self-concept, $t(131) = -6.19$, $p < .001$, $d = -0.54$. Based on this D-score and the breakpoints into association strengths in either the masculine or the feminine direction, one association strength variable was created that distinguished the participants into these categories. In addition to the categorization into the distinct strengths of association, another variable was computed to represent the dichotomy between a stereotypically masculine versus a stereotypically feminine self-concept. Compared to the even distribution of men to women within this sample, the stereotypical self-concept was less balanced. In line with the association strength categories, a vast majority of the sample ($n = 94$) incorporated a stereotypically feminine self-concept (71%), regardless of their identification with being male or female. Table 5 illustrates the juxtaposition of these two categorical variables and how these categories were distributed within this sample.

Table 5

Labels and Distributions of the two Implicit Association Variables

Association	Association Strength Variable						
	Stereotypically Feminine			No	Stereotypically Masculine		
Strength	Strong	Moderate	Slight	No	Slight	Moderate	Strong
Breakpoints	< -0.65	-0.35	-0.15		0.15	0.35	> 0.65
Frequency	31	26	20	25	17	11	2
Percentage	24	20	15	19	13	8	2

Association	Dichotomous Variable	
	Stereotypically Feminine	Stereotypically Masculine
Breakpoints	< 0	> 0
Frequency	94	38
Percentage	71	29

Note. Breakpoints of the D-scores range from –2 to +2.

Concerning the correlation between the implicit and the explicit measure of gender self-concept, the respective D-score obtained from the IAT was correlated with the items from the explicit measure that were grouped to represent a mean masculinity score including four items ($\alpha = .54$) and mean femininity score consisting of four items as well ($\alpha = .47$). In addition, the correlations between the identified gender and these two measures were established. All of these are displayed in the correlation matrix in Table 6. As a result of the highly significant correlation between the implicit association score, representing the stereotypically masculine–feminine dichotomy, and the identified gender, it seemed that those two variables provided highly similar information. Therefore, the subsequent step

investigated the third hypothesis to see whether the implicit self-concept was superior to the identified gender variable in predicting the applied coping mechanism.

Table 6

Correlation Matrix Between Gender Variables

Variable	1	2	3	4
1 Identified Gender	—			
2 Implicit Association	.39**	—		
3 Explicit Association Masculine	.21*	.00	—	
4 Explicit Association Feminine	.01	.04	-.21*	—

* p < .05, two-tailed. **p < .01 level, two-tailed.

The third hypothesis concerned the additive effect of a gender-stereotypical self-concept on intensifying the likelihood to choose emotional social support or substance use, respectively, as a means of coping with life stressors. As in the previous analyses, the degree of traumatization and age were initially tested for. Within this sample, age did not exert a significant influence on the association with an either stereotypically feminine or masculine self-concept, $F(19, 112) = 1.47$, $p = .110$, $\eta_p^2 = .20$. Concerning the degree of traumatization, this effect also did not reach significance, $F(18, 113) = 0.98$, $p = .486$, $\eta_p^2 = .14$. Consequently, there was no need to control for the influence of age nor the extent of traumatization because these variables did not exert an influence on the categorization into a stereotypically feminine or a masculine self-concept.

As the homoscedasticity assumption was met with this newly computed dichotomous variable in combination with social support, it was justified to proceed with a regular

ANOVA. Concerning the propensity to seek social support, the ANOVA revealed a significant difference between those who embrace a stereotypically feminine ($M = 2.74$, $SD = 0.87$) versus a stereotypically masculine ($M = 2.36$, $SD = 0.76$) self-concept, $F(1, 130) = 5.69$, $p = .018$, $\eta_p^2 = .04$. In this sense, those with an implicitly feminine self-concept were significantly more likely to seek social support as a means of coping than those with a masculine one. Regarding substance use as a coping mechanism, however, the Levene's test reached significance, therefore, a Brown-Forsythe test correction including adjusted degrees of freedom was applied. This ANOVA did not reach significance, $F(1, 60) = 0.51$, $p = .478$, $\eta_p^2 = .01$, therefore, not pointing at a significant difference between a stereotypically masculine ($M = 1.70$, $SD = 0.92$) and a stereotypically feminine self-concept ($M = 1.58$, $SD = 0.79$) in terms of the propensity to use substances following life stressors.

Comparing the predictors in a linear regression model, the implicit self-concept dichotomy captured more of the sample's variance regarding social support, $F(1, 130) = 5.69$, $p = .018$, $R^2 = .04$) than the identified gender, $F(1, 130) = 4.84$, $p = .030$, $R^2 = .04$. In terms of the propensity to use substances, the identified gender accounted for more of the sample's variance, $F(1, 130) = 6.06$, $p = .015$, $R^2 = .05$, than the implicit self-concept, $F(1, 130) = 0.58$, $p = .447$, $R^2 = .00$. Therefore, depending on whether social support or substance use as a coping mechanism was inspected, the best predictor was the implicit self-concept or the identified gender, respectively.

Discussion

The present study aimed at extending the knowledge of how gender differences exert an influence on applying different coping strategies, specifically social support versus

substance use, following life stressors. Regarding the first hypothesis that there is a gender difference in the propensity to rely on social support as a coping mechanism after life stressors, it was revealed that women are indeed significantly more likely to seek social support. Concerning the second hypothesis stating that men are more likely than women to use substances following life stressors, the results in fact supported this tendency which is in line with the self-medication hypothesis.

Contrary to predictions of the third hypothesis, the focus on incorporating an either stereotypically masculine or feminine self-concept only offered an added value when predicting coping with social support but not with substance use. Therefore, the propensity to manage life stressors by relying on social support differed depending on the self-concept that a person incorporated in terms of gender roles. This implicit stereotypically masculine–feminine dichotomy proved better at distinguishing between people's likelihood to seek social support than the standard male–female variable. The opposite pattern manifested with substance use so that the implicit gender self-concept did not predict using substances unlike the original gender variable.

Identified Gender

Social support. Along the same lines as previous research (Allen & Gordon, 1990; Good & Sherrod, 2001), the present study revealed that men were indeed less likely than women to rely on social support networks after life stressors. This study relied exclusively on the emotional social support scale and not the instrumental social support scale of the COPE Inventory (Carver et al., 1989). This choice was based on the previously detected larger gender difference in the emotional social support scale than the instrumental social support scale (Ashton & Fuehrer, 1993). Strikingly, the item that reached significance included the

wording *emotional support* which might have caused a more pronounced effect and distinction from the remaining three items of the emotional social support scale. Therefore, this study provided additional evidence for women embracing this coping strategy significantly more often than men.

The benefits of social support networks in dealing with challenging situations include that social support could facilitate posttraumatic growth and consequently a positive change in mental well-being following the traumatic event (Han et al., 2019). The same could not only apply to a clinical population but also to the general population, as Frans et al. (2005) claimed that social support networks decreased feelings of helplessness significantly. These positive effects of social support networks were summarized in the so-called *buffering model* (Cohen & Wills, 1985, p. 310), according to which social support mitigates against potentially negative effects of stressors. Another investigation revealed that this buffering effect was detected in women more than in men (Henderson, Byrne, Duncan-Jones, Scott, & Adcock, 1980; Husaini, Newbrough, Neff, & Moore, 1982). This difference was attributed to distinct support needs and support providers. As an example, emotional social support provided by spouses seemed to buffer stress for women whereas men benefited from this to a lesser degree. In contrast, men tended to rely on other functions of social support as a buffer in accordance with the finding that men were more prone to consult instrumental support (Ashton & Fuehrer, 1993). This difference in the function of social support could offer an explanation as to why women are potentially more inclined to seek emotional social support in the first place. On the contrary, men did not appear to utilize social support to a similar degree as women in order to moderate their stress levels. This gender difference in the functionality of social support and the need of social support as a stress relieving mechanism might serve as an additional explanation for the pattern of results in this study.

Even though relying on social support is primarily considered an adaptive coping strategy, it must also be taken into account that it might backfire (Helgeson & Fritz, 1998; Rudolph & Hammen, 1999). Due to the contradiction that women possess a heightened vulnerability to develop PTSD (Frans et al., 2005) despite presumably healthier coping styles, in the following tentative links are outlined. One possibility comprises that a strong focus on social support networks might involve a higher likelihood of encountering interpersonal stressors. Based on findings of Rudolph and Hammen (1999), stress factors for adolescent girls seemed to be centered around interpersonal conflicts whereas boys in that age were more stressed by noninterpersonal stressors such as school challenges. This overinvolvement with others' needs explained a quarter of the variance of gender differences in distress (Gore et al., 1993). In this sense, being highly focused on social support for coping might potentially be at the expense of balancing it with other coping strategies.

Likewise, women tend to practice *unmitigated communion* which was characterized by an extensive orientation on others' needs at the expense of one's own needs (Helgeson & Fritz, 1998, p. 173). This construct could help to differentiate between a healthy and an unhealthy way of relying on social support. Hereby, unmitigated communion was also associated with more imbalanced relationships which implies that those providing social support might not necessarily receive the same support in return (Helgeson, 1993). Connecting these concepts with attachment theory, unmitigated communion was associated with an insecure attachment style whereas regular communion was related to a secure attachment style (Helgeson & Fritz, 1998). Highlighting these links, this research consequently discussed the impact of adverse early relationship experiences on the development of this overreliance on scarifying other's needs. In these instances, the adaptive coping strategy of social support might turn into a burden by evoking more life stressors and

a higher need for additional coping strategies. As a result, the presumably positive coping

mechanism that was replicated in this study must be put into perspective, and potential

downsides of an overreliance on social support must be considered.

Substance use. Based on the previous research of Maguen et al. (2012) who found

that men were more likely than women to comorbidly develop SUD next to PTSD, this

research was able to replicate the finding that men were significantly more likely than women

to use substances in the case of life stressors. As all four items of the scale yielded a

significant difference, the internal consistency of the scale as a measure appeared high as well

so that noise was unlikely to have confounded the results. The added value within the present

research concerned the examination of this propensity to use substances in a nonclinical

sample with life stressors that were deemed relatable for a general population. Due to the

presence of this effect despite the absence of a diagnosis, an even stronger case was made for

the propensity of men to use substances as a form of coping.

These findings offered additional evidence in favor of the self-medication hypothesis

(Khantzian, 2003) which appeared to be more applicable to men than to women. Focusing on

self-medication, the substances might serve quite distinct functions depending on their exact

effects. Even though the hyperarousal and avoidance symptomology in PTSD seemed to

evoke most aspirations to self-medicate according to previous research (Bremner et al., 1996;

Chilcoat & Breslau, 1998), the preferred drug of choice overall depends on the expected

psychological and physiological function of the particular substance. An analysis combining

personality traits with the different substance groups revealed that opiates often served the

purpose of numbing traumatic experiences and providing relief from the associated pain

(Suh, Ruffins, Robins, Albanese, & Khantzian, 2008). As this sample consisted of nonclinical

participants, it could, however, be difficult to pinpoint one drug of choice in this sample. Consequently, alcohol as the most socially acceptable and accessible drug might have been used as a reference point when filling out the COPE Inventory. By contrast, mostly prescribed drugs are used to self-medicate in particular by women (Chilcoat & Breslau, 1998; Ford, Reckdenwald, & Marquardt, 2014). Additionally, the self-medication hypothesis could be extended to include seeking relief by means of indulging in fatty or sugary food—a behavioral tendency which is more prominent among women, and which was not adequately captured by the questions of the COPE Inventory which exclusively focused on substances conventionally considered to be addictive (Brewerton, 2011). Therefore, these means of self-medication might not have been captured within the general wording of the items of the substance use scale of the COPE Inventory. Due to this, potentially existing self-medication by women might not have been detected as a result of an overly broad phrasing. However, one could also imagine ways in which substance use in men was not necessarily captured by the questions so that it was likely that a true gender difference was still displayed.

The tendency for men to self-medicate is in line with the notion of toxic masculinity (Kupers, 2005), as it painted a picture of a self-reliant, independent man whose supposedly masculine behaviors in fact lead to adverse mental health effects. In the same vein as unmitigated communion, *unmitigated agency* represents the dysfunctional version of agency and, therefore, an excessive pursuit of exclusively personal needs (Helgeson & Fritz, 1999, p. 132). Parallel to the negative aspects of relying on social support in a way that unmitigated communion emerges, substance use might be a manifestation of unmitigated agency. As these concepts bridge gender and the stereotypical gender self-concept, these traits are also of interest in the discussion of the impact of the implicit self-concept on coping behavior.

Implicit Gender Self-Concept

Regarding the third hypothesis that the implicit gender self-concept can explain the coping mechanism better than identified gender, equivocal findings were obtained. On the one hand, social support yielded a significant difference between those with a stereotypically feminine and masculine self-concept in the expected direction and proved to be a superior predictor to the identified gender variable. On the other hand, this new variable did not only fail to reach a significant difference in substance use but also proved to be worse than the identified gender variable in explaining the sample variance. In the following, tentative explanations for these slightly contradictory findings are elaborated on consecutively.

Social support. Based on the research of Helgeson and Fritz (1998), unmitigated communion might serve as an explanation for the significant difference in social support between those embracing a stereotypically feminine versus a stereotypically masculine self-concept in this sample. Early in life, people are socialized into distinct gender roles, in line with social role theory (Eagly & Wood, 2012), with agency and communion often considered as the core of a masculine and feminine self-identity respectively (Feingold, 1994). This independent versus interdependent orientation is likely to exert an influence on various aspects of a person's life and might be particularly pronounced when it comes to life stressors. However, communion with the absence of agency equals an attitude sacrificing one's own for another one's needs and seems to be characteristic of stereotypically feminine behavior. Potentially, these findings reflected this tendency to incorporate unmitigated communion as the items used in the implicit and explicit measure such as *caring* and *understanding* but also *weak* on face value tapped specifically into this domain. Moreover, attachment theory was found to represent a reasonable moderator between a helpful level of social support with a secure attachment style and a sacrificing level of social support with

insecure attachment styles (Florian, Mikulincer, & Bucholtz, 1995; Helgeson & Fritz, 1998; Ognibene & Collins, 1998). In this sense, the development of a distinct attachment style was discussed to be embedded in a process of gender socialization so that women were enforced to be more outward oriented from an early age, and this tendency might manifest over time. In accordance with social role theory (Eagly & Wood, 2012), the findings of this study stressed again that social support was associated with a stereotypically feminine self-concept.

Apart from that, the fact that the implicit gender self-concept variable based on the D-score was indeed a better predictor for coping with social support than the conventional gender variable requires further explanation. In this sense, one inherent part of a feminine gender role evolves around caretaking. This often comes with a tendency to sacrifice one's own needs and might be at the expense of other effective coping strategies (Simmons, 2007). It appears as if an outward orientation is inherent to a stereotypically feminine self-concept; however, this might also manifest itself in people that identify as men. As the sample consisted of a balanced proportion of men to women, it appeared striking that the mean D-score revealed a slight association with a stereotypically feminine self-concept throughout the sample. Hereby, a few participants that identify as men but embrace a more stereotypically feminine self-concept implicitly belonged to this new variable. Consequently, several men were represented by implicitly holding a feminine self-concept. According to McCreary (1994), men are granted less freedom to behave contrary to stereotypes than women. Therefore, these implicit associations in the sample could have revealed a tendency that under different circumstances remains hidden by circumventing the threat of being stigmatized for nonconform gender behavior otherwise. As a result of this, this implicit variable might have captured more of the sample variance in coping with social support than the mere male–female distinction and, therefore, proved superior to the identified gender variable.

Substance use. Nevertheless, those effects that failed to reach significance require further scrutiny. In this sense, the fact that the implicit gender self-concept did not account for a significant difference in coping by means of substance use implies that potentially substance use was not necessarily connected to an integral part of the self-concept. Therefore, using substances might not serve as an expression of a stereotypically masculine behavior as expected based on previous findings (Jajodia & Earleywine, 2003; Lemle & Mishkind, 1989). This apparent contradiction might be traced back to the fact that this study employed an implicit design. Therefore, even though people might have claimed in explicit designs that drinking reflected a part of their masculine identity, their implicit stance might deviate from that. In fact, several psychodynamic theories (see Lemle & Mishkind, 1989) claimed that those men prone to drinking problematic amounts possessed fragile masculinities. This implies that they felt uncomfortable as a result of a perceived misfit to the masculine norm, and consequently drinking might serve the purpose of masking this subjective inadequacy. As a result, this contradiction of covert fragile masculinities and overtly presenting highly masculine behavior could explain why substance use did not reach significance in this study. Complementary to these theories, more research is needed using other psychological approaches outside of psychodynamics to delve into why substance use did not reach significance.

Referring to what Helgeson and Fritz (1999) exposed, the culmination of an overly masculine self-concept might be unmitigated agency—a trait that is characterized by an exorbitantly high level of independence at the expense of social bonds. In case this trait also operates explicitly to conceal perceived male inadequacy, it could likely not show sufficiently unless clinical levels are reached. In particular, the fact that this study dealt with two behavioral patterns that could reach clinical levels, namely substance use and life stressors,

the lack of significance with substance use could be attributed to the choice of the nonclinical

sample as well. The possibility arises that the predictive validity between one's implicit self-

concept and this specific coping strategy was compromised as participants still functioned to

a degree that an implicit bias could be controlled and not necessarily be expressed in

behavior. Hence, in a similar vein as the notion of fragile masculinities, substance use might

function as a behavioral compensatory mechanism masking the underlying implicit self-

concept. This explanation could also partly account for the lack of significance.

Furthermore, the fact that the implicit gender self-concept did not prove superior to

the identified gender requires further clarification and a detailed inspection of the meaning of

the variable. Hereby, the implicit gender self-concept variable created a masculine–feminine

dichotomy that potentially did not capture the true nature of traits. As outlined by Kachel,

Steffens, and Niedlich (2016) in a criticism towards the BSRI, these scales that aimed to

divide people into either masculinity or femininity sometimes failed to accomplish this task.

Instead, many people were characterized by being androgynous or undifferentiated instead

and, therefore, possessed a mixture of traits considered masculine and feminine or were low

on both, respectively. For the sake of parsimony, these two categorizations were not

considered in the present study to ease the comparison of this variable with the identified

gender variable. However, this simplicity might have run the risk of losing valuable

information as those people that incorporate both stereotypically masculine and feminine

traits in their self-concept to a similarly high degree were most likely to be averaged and

categorized as possessing little or no association. As a result of this lack of addressing

categories outside this dichotomy, the quality of implicit self-concept as a predictor for

coping by means of substance use might have been compromised which could have been

responsible for the lack of significance with substance use.

Additionally, the thought arises that more extensive interconnections existed between life stressors and a gender-stereotypical self-concept. For instance, one of the life stressors that reached a significant difference on this variable asked if the participant or a family member has ever been to jail. Potentially, the kind of life stressor one has encountered shaped one's self-concept in the first place and was therefore inextricably linked to gender socialization. The same could be expected in the case of physical neglect as this life stressor could cause a person to become more self-reliant. In this sense, Rosen and Martin (1998) investigated the effect of child neglect on gender-related attributes and arrived at the conclusion that following early neglect experiences positive attributes failed to develop in neither the masculine or the feminine domain. This illustrates to what extent early maltreatment affects the development of a positive gender self-concept in the first place. Similarly, those with implicitly stereotypical gender self-concepts might evaluate life stressors and associated coping mechanisms differently. Due to this potential reversed causality, this variable could have been overly noisy and compromised the quality of implicit self-concept as a predictor of coping with substance use.

In practical terms, the fallibility of the implicit self-concept as a predictor for the propensity to use substances illustrates that it might be difficult to draw inferences based on one's implicit self-concept with regards to that specific coping strategy. It is yet uncertain whether potential links were hidden due to restricted predictive validity or whether there was another external variable accounting for an interaction between the implicit self-concept and substance use as a coping mechanism. As a result of this uncertainty, one recommendation concerns a greater awareness to ingrained gender roles. However, this appeared more essential regarding social support based on the findings of the present study. In either way,

the findings of this study suggested questioning and breaking up the obsolete male–female dichotomy to make space for more comprehensive approaches.

Strengths and Limitations

Concerning the design of the study, the manipulation succeeded as the LSC–R proved to capture life stressors that a vast majority of the sample has encountered. This ensured the salience of the life stressor to apply associated coping strategies in the next step, and therefore, internal validity was present with this measure. Moreover, this sample reflected a high degree of potential traumatization despite its nonclinical nature. Compared to the proportion of people encountering a traumatic event within their lifetime (80%) in the study by Frans et al. (2005), the present sample was characterized by a higher degree of potential traumatization. Even though a different measure was applied, it should have been comparable due to the inclusion of similar life stressors. This confirmed the need to pay greater attention prospectively to the impact of life stressors on a general population. Similarly, the expected gender pattern in terms of the kinds of traumatic events reoccurred similarly to what was found by Perrin et al. (2014). This provided additional evidence that men and women tend to encounter a similar amount of traumatic experiences, however, have different individual experiences.

Apart from that, the study offered novel insights which reached beyond the hypotheses. For instance, in line with prior research (Hofmann et al., 2005; Perugini, 2005), the correlations between the implicit and explicit measures were not significant. This offered additional evidence that implicit biases might reveal tendencies that otherwise remain unnoticed by explicit self-report scales. Moreover, the fact that only one item reached significance in the social support scale evoked doubts concerning the construct validity of the

social support scale of the COPE Inventory. These methodological insights could be integrated into the further improvement of the instruments. As a result of an international sample, the external validity of the study was ensured by covering various backgrounds.

One of the drawbacks of the present study concerned the reliance on a convenience sample consisting of social networks of the researcher due to the scope of this study. The participants recruited from these personal networks might have been slightly homogenous in political view with an assumed tendency leaning towards the left-wing. Consequently, the slight association with a more stereotypically feminine self-concept might have manifested itself in this sample. This could be the case because research revealed that traditionally left-wing parties tended to be implicitly associated with feminine attributes whereas right-wing parties were connected with masculine ones (Winter, 2010). Moreover, the mean age of the sample was young which could have explained the distribution into association strength groups that were less strong, in particular, in the masculinity dimension (see Table 5). In this sense, younger people might not yet have developed gender-stereotypical thinking to the same degree as older people (Lopez-Zafra & Garcia-Retamero, 2012). In addition, the reliance on a nonclinical sample might not have been ample to draw inferences as in this study both substance use and the traumatic experience could have reached clinical levels. However, it also opened the potential for generalization of these findings to a general population in order to not exclusively address clinical cases.

Apart from that, the representativeness of the masculinity–femininity words which formed the foundation of the implicit self-concept variable could have introduced noise. Even though the words for the IAT were generated by the aid of a brief pilot study, it remained uncertain whether the words truly represent masculinity and femininity appropriately so that

it was difficult to establish construct validity here. The correlation matrix in Table 6 provides insights concerning the relation between the various gender measures. In particular, the correlation between the explicit measure of femininity and the identified gender was low. As the implicit measure embedded the same words, it was uncertain whether an adequate discrimination based on this was possible. However, this could have also been attributed to the previously detected low correlations between implicit and explicit measures (Hofmann et al., 2005).

Concerning internal validity, the fact that the study consisted of an online questionnaire might have compromised the ability to control for influences on the dependent variables beyond the intended ones from the independent variables, thereby decreasing internal validity. Even though Klein et al. (2018) argued for the comparability findings from online and laboratory studies, the lack of control of experimental settings in this online questionnaire might have caused unintended errors. Moreover, based on received informal feedback, some participants deemed the IAT task counterintuitive. In particular, the necessity to correct for an error in categorization created the impression as if, for instance, being masculine and caring or feminine and powerful were not compatible. Even though the instructions specifically asked to sort the words in a specific way, this might have led to a reluctant attitude while implementing the IAT. Despite these limitations, this study could give an impetus to advance research into disentangling the factors that determine the coping behavior after life stressors.

Another possibility is that coping with social support and coping with substance use might not have been as incommensurable as they seemed at first glance. In practical terms, male coping might be accompanied by a mixture of opening to emotional expression whilst

sharing an alcoholic drink with peers. In this sense, using substances might emerge as an

integral part of the group identity and might be encouraged as a social activity. At the same

time, women might initiate to use substances in order to bond with partners who have a habit

of using substances (Stöver, 2017). Consequently, both coping mechanisms are likely to

occur simultaneously so that a strict division might not be representative in real life. For the

sake of efficiency, this study did not include the setting of substance use which could have

offered original insights into the habitual patterns surrounding these coping mechanisms.

Even though statistical significance was reached for most of the hypotheses, the

question arises to what extent this comprised practical significance as well. When inspecting

the difference of response options, the variance of response options was mostly between

anchor 2 (*I do this a little bit*) and 3 (*I do this a medium amount*). Nevertheless, Greenwald et

al. (2015) counteracted these concerns by highlighting that even subtle differences could

manifest in entirely distinct behaviors. Therefore, these findings unveiled an interesting trend

that could be examined further for its practical value, particularly when the difference

between exhibiting a dysfunctional behavior such as substance use rarely or sometimes

becomes critical.

Future Research

Suggestions for prospective studies concern a replication with a clinical sample to

figure out whether this distinctive gender-specific pattern of coping mechanisms is more

pronounced when it reaches dysfunctional levels than in the general population. Hereby, both

sufferers from PTSD and SUD, either individually or comorbidly, could offer interesting

insights as a sample. In addition, a detailed focus on one substance use group compared to

another could also help in distinguishing the associated coping mechanisms. Regarding a

nonclinical sample, recruiting more specifically outside of the university could circumvent the concern that a sample is overly homogenous in terms of their age as well as their attitudes.

Moreover, suggestions derived from this study concern the potential inclusion of more concepts into future research to close the knowledge gaps. As a result of the gender-specific orientation on interpersonal versus noninterpersonal stressors in adolescent girls and boys, respectively, future studies of coping strategies with life stressors could benefit from examining this division further (Rudolph & Hammen, 1999). In addition, a more differentiated scale of coping with substance use, including a differentiation between diverse classes of substances, might provide more insights into preferential uses of some substances over others as a means of self-medication by each gender.

Due to the potential of the concepts of unmitigated communion and unmitigated agency to explain the results of this study (Helgeson & Fritz, 1998), an inclusion of items tapping into these domains could prove useful to shed novel light on these traits and their influence on coping strategies. By combining these concepts with an IAT design, one might gain an original insight and potentially explain more concerning the preference for one coping strategy over another. For instance, if both are assessed in an explicit design and communion is present whereas agency is absent, one could infer negative mental health consequences from that and consequently counteract those with treatment. To obtain a more holistic and developmental picture of coping, attachment theory could be investigated as well to explain unmitigated communion and unmitigated agency, including their accumulative effect on coping.

Conclusion and Implications

Even though it remains difficult to disentangle the male–female and the stereotypically masculine–feminine self-concept dimensions, a greater awareness of the effects of gender socialization based on social role theory (Eagly & Wood, 2012) in approaching coping mechanisms is justified. In this sense, the mere focus on gender demonstrated that a differential vulnerability to life stressors might exist. However, an additional focus on implicit gender concepts might aid in offering novel insights. As people aspire to behave consistently, and self-consistency seems to be inextricably linked to improvements in mental health (Webb & Jobson, 2011), raising awareness to possibly unconscious implicit attitudes might break vicious behavioral habits and improve mental well-being sustainably.

On a nonclinical scale, these findings might lead to loosening rigid frameworks of conduct by slowly changing ingrained gender roles and gender stereotypes. Consequently, this could allow more men to express their emotions openly and initiate searching for social support, if needed, whereas women could acquire a greater freedom to not overly rely on meeting others' needs at the expense of their own. In this sense, not only toxic masculinity could be tackled but also its counterpart toxic femininity could be acknowledged and subsequently antagonized. On a clinical scale, these findings could be generalized and integrated into feminist therapy (Simmons, 2007) or gender aware therapy (Good, Gilbert, & Scher, 1990) by increasingly unravelling gender stereotypes and their potentially adverse mental health consequences. Despite not finding support for all hypotheses, this study could give an impetus to advance research into disentangling the factors that determine coping behavior after potentially traumatizing life stressors in order to offer the best care to all gender identities.

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Appendix

Online Questionnaire

Informed Consent

This research is part of a Master Thesis project in Psychology at Lund University. The main aim is to investigate individual differences in coping mechanisms that are applied following life stressors. By gaining more insights into how these events are dealt with, a greater understanding could inform the way treatment is delivered on a practical scale and improve the well-being of society on a larger scale sustainably.

The entire questionnaire will take approximately 12 minutes and consists of a combination of established measures and a reaction time test assessing associations between constructs. Your participation is entirely voluntary and thus you reserve the right to withdraw from the study at any point without any consequences.

All data will be treated confidentially and anonymously. By using codes, the data cannot be traced back to the individual person. Due to the focus on potentially traumatic events, the questionnaire might trigger potentially sensitive personal memories. Apart from this, no risks can be expected as a result of taking part in this research. The benefits gained through this research involve greater insights into a theoretical understanding of trauma which could be transferred into a more targeted treatment subsequently.

If you have any questions or remarks, you can contact the researcher Julia Panknin (ju5464pa-s@student.lu.se) or her supervisor at the department Kajsa Järvholm (kajsa.jarvholm@psy.lu.se).

Thank you for your contribution to the progress of research within psychology.

I have read and understood the above information and I hereby agree to participate in the study.

☐ Yes

☐ No

What is your age?

_____

What is the gender you identify with?

Male ☐

Female ☐

Other ☐ _____

Prefer not to say ☐

What is your nationality?

_____

Now we are going to ask you some questions about events in your life that are frightening,

upsetting, or stressful to most people. Please think back over your whole life when you answer these

questions. Some of these questions may be about upsetting events you don't usually talk about.

Your answers are important, but you do not have to answer any questions that you do not want to.

Thank you.

Have you ever been in a serious disaster (for example, an earthquake, hurricane, large fire,

explosion)?

☐ Yes

☐ No

Have you ever seen a serious accident or have been in an accident yourself?

☐ Yes

☐ No

Have you or a close family member ever been sent to jail?

☐ Yes

☐ No

Were you ever put in foster care or put up for adoption?

☐ Yes

☐ No

Did your parents ever separate or divorce while you were living with them?

☐ Yes

☐ No

Have you ever been separated or divorced?

☐ Yes

☐ No

Have you ever had a very serious physical or mental illness (for example, cancer, heart attack, serious operation, felt like killing yourself, hospitalized because of nerve problems)?

☐ Yes

☐ No

Have you ever been emotionally abused or neglected (for example, being frequently shamed, embarrassed, ignored, or repeatedly told that you were "no good")?

☐ Yes

☐ No

Have you ever been physically neglected (for example, not fed, not properly clothed, or left to take care of yourself when you were too young or ill)?

☐ Yes

☐ No

Have you ever been responsible for taking care of someone close to you who had a severe physical or mental handicap (for example, cancer, stroke, AIDS, nerve problems, can't hear, see, walk)?

☐ Yes

☐ No

Has someone close to you died suddenly or unexpectedly (e.g. caregivers, family members, friends)?

☐ Yes

☐ No

Has someone close to you died (do NOT include those who died suddenly or unexpectedly)?

☐ Yes

☐ No

Did you ever see violence between family members (for example, hitting, kicking, slapping, punching)?

☐ Yes

☐ No

Have you ever seen or been in a robbery, mugging, or attack?

☐ Yes

☐ No

Were you ever abused or physically attacked (not sexually) by someone you knew?

☐ Yes

☐ No

Have you ever been bothered or harassed by sexual remarks, jokes, or demands for sexual favors by someone at work or school?

☐ Yes

☐ No

Were you ever touched or made to touch someone else in a sexual way because he/she forced you in some way or threatened to harm you if you didn't?

☐ Yes

☐ No

Did you ever have sex (oral, anal, genital) when you didn't want to because someone forced you in some way or threatened to hurt you if you didn't?

☐ Yes

☐ No

Are there any events we did not include that you would like to mention?

At this point, we would like to highlight again that everything you provide here will be treated anonymously.

☐ Yes   _____

☐ No

Have any of the events mentioned above ever happened to someone close to you so that even though you didn't see it yourself, you were seriously upset by it?

☐ Yes

☐ No

Now we would like you to focus on one of the previous life stressors that you subjectively perceived as most disturbing. Please state which of the following coping strategies you most likely would have chosen in that situation. If you were younger than 18 years at the time of the specific life stressor, please imagine how you would cope with the same situation nowadays.

Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU - not what you think "most people" would say or do.

I get used to the idea that it happened.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

I discuss my feelings with someone.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

I use alcohol or drugs to make myself feel better.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

I laugh about the situation.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

I try to get emotional support from friends or relatives.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

I try to lose myself for a while by drinking alcohol or taking drugs.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

I sleep more than usual.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

I get sympathy and understanding from someone.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

I drink alcohol or take drugs, in order to think about it less.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

I go to movies or watch TV, to think about it less.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

I talk to someone about how I feel.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

I use alcohol or drugs to help me get through it.

☐ I don't do this at all

☐ I do this a little bit

☐ I do this a medium amount

☐ I do this a lot

In the next step, you will complete a task that will measure how quickly you make associations between categories of words. These word categories are 'self' versus 'other' and 'stereotypically masculine' versus 'stereotypically feminine'. You will be asked to sort the words in the table below into the specific groups as fast and as accurate as you can.

Self	Other	Masculine Stereotype	Feminine Stereotype
I	You	Dominant	Caring
Me	Your	Powerful	Soft
Mine	Them	Aggressive	Understanding
Myself	Their	Strong	Weak

There are seven parts and the instructions slightly change for each one. Please pay attention!

Self   **Other**

+

Instructions: Place your left and right index fingers on the E and I keys. At the top of the screen are 2

categories. In the task, words appear in the middle of the screen.

When the word belongs to the category on the left, press the **E** key as fast as you can. When it

belongs to the category on the right, press the **I** key as fast as you can. If you make an error, a red **X**

will appear. Correct errors by hitting the other key.

Please try to go as *fast as you can* while making as few errors as possible.

When you are ready, please press the [Space] bar to begin.

Part 1 of 7

Feminine   **Masculine**

+

Now, the categories have changed, but the rules remain the same. Please try to go as *fast as you can*

while making as few errors as possible. Correct errors by hitting the other key.

When you are ready, please press the [Space] bar to begin.

Part 2 of 7

Feminine   **Masculine**

Self   **Other**

Or   Or

Feminine   **Masculine**

+

Now the four categories you saw separately will appear together. Remember, each word fits in only

one of the four categories. The label colors may help you identify the appropriate category.

Use the **E** key for the two categories on the left and the **I** key for the two categories on the right.

Again, try to go as fast as possible without making mistakes. Correct errors by hitting the other key.

Practice this combination now.

When you are ready, please press the [Space] bar to begin.

Part 3 of 7

Self   **Other**

Or   Or

Feminine   **Masculine**

+

Please continue the task as you were just doing it. Again, try to go as fast as possible without making

mistakes. Correct errors by hitting the other key.

When you are ready, please press the [Space] bar to begin.

Part 4 of 7

Masculine   **Feminine**

<div align="center">

+

</div>

Notice the categories from before have switched sides. Please practice this new configuration now.

Remember to try to go as *fast as you can* while making as few errors as possible. Correct errors by

hitting the other key.

When you are ready, please press the [Space] bar to begin.

Part 5 of 7

Masculine   **Feminine**

Self   **Other**

Or   Or

Masculine   **Feminine**

+

Notice the four categories have been combined again, but in a new configuration. Please practice

this combination now, and remember to go as fast as you can while making as few mistakes as

possible. Correct errors by hitting the other key.

When you are ready, please press the [Space] bar to begin.

Part 6 of 7

Self   **Other**

Or   Or

Masculine   **Feminine**

+

Please continue the task as you were just doing it, and remember to go as fast as you can while

making as few mistakes as possible. Correct errors by hitting the other key.

When you are ready, please press the [Space] bar to begin.

Part 7 of 7

This is the end of the previous test.

As a last step, we would like to know to what extent the following word describes you in general?

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly Agree
Caring	O	O	O	O	O	O	O
Dominant	O	O	O	O	O	O	O
Understanding	O	O	O	O	O	O	O
Weak	O	O	O	O	O	O	O
Aggressive	O	O	O	O	O	O	O
Powerful	O	O	O	O	O	O	O
Soft	O	O	O	O	O	O	O
Strong	O	O	O	O	O	O	O

This is the end of the questionnaire. Thank you for your participation in this study.

The study aims to figure out ways in which coping mechanisms after life stressors differ by gender. Hereby, we hypothesize that men tend to be more likely to use substances in an attempt to self-medicate at the expense of seeking social support. Moreover, we hypothesize that these differences tend to be more pronounced if the person implicitly embraces stereotypical gender roles as part of their self-concept.

We highly appreciate your participation because it is a valuable contribution towards the progression of research for the sake of figuring out individual differences in coping with trauma. We would like to stress that the words that were deemed masculine or feminine represent merely stereotypes and for that reason do not reflect the opinion of us as researchers concerning what masculinity or femininity is. These words were compiled based on current research as well as a pilot study to reach words that imply this stereotypical content.

If you have concerns about your mental health, we encourage you to speak with a professional. If you wish to get mental health support in Lund, for instance, you can book an appointment with one of the [counsellors at the university](). Outside the university, [1177 Vårdguiden]() offers professional help.

In case of any further questions, feel free to contact the researcher Julia Panknin ([ju5464pa-s@student.lu.se]()) or her supervisor at the department Kajsa Järvholm ([kajsa.jarvholm@psy.lu.se]()).