"Am I the crazy one?" - Exploring the Role of Self-Esteem in the Acceptance of gaslighting, with Need for Control as a Mediating or Moderating Factor

Singhara Johanna Madu de Silva (s2814420)

Faculty of Behavioural, Management and Social Sciences, University of Twente

Bachelor's Thesis Psychology

Attendance: dr. P.M. ten Klooster

Second Supervisor: drs. M.T.E. Kouijzer MSc

Abstract

Gaslighting, a covert and manipulative form of psychological abuse, can have profound long-term impacts on victims. Despite the high prevalence of psychological abuse in intimate relationships, there is limited understanding of its predictors. This study aimed to explore the relationship between self-esteem and the acceptance of gaslighting tactics, while considering the potential mediating or moderating role of the need for control. A cross-sectional online survey was conducted with 82 participants, recruited through convenience and network sampling. The survey included validated questionnaires measuring gaslighting acceptance, self-esteem, and need for control. The results indicated no significant direct correlation between self-esteem and the acceptance of gaslighting tactics. Additionally, the need for control did not mediate or moderate this relationship. A significant medium positive correlation was found between self-esteem and the need for control. These findings suggest that while self-esteem may not directly influence the acceptance of gaslighting, it is related to the need for control. The study highlights the need for further research using alternative measures of self-esteem, need for control, and particularly for socially sensitive topics like gaslighting, to better understand the complexities of gaslighting and its' antecedence. Developing more comprehensive assessment tools and exploring more diverse samples could enhance our understanding and provide information for effective prevention and intervention strategies against forms of psychological abuse such as gaslighting.

Keywords: Gaslighting, Psychological Abuse, Self-esteem, Need for Control

"Am I the crazy one?" - Exploring the Role of Self-Esteem in the Acceptance of gaslighting, with Need for Control as a Mediating or Moderating Factor

Violence in intimate partner relationships (IPV), both physical and psychological, is a known and long-standing problem of humankind. In contrast to physical violence, where the consequences for victims are often overtly visible, the wounds of psychological violence are harder to recognise and hence often difficult to heal. This perception is supported by Anderson et al. (2003) who found evidence supporting that psychological abuse can be more harmful than physical abuse. Even victims of IPV reported to perceive physical abuse being less threatening than psychological abuse (Dutton & Starzomski, 1993).

Although the lifetime prevalence for physical and psychological abuse differs across populations, the overall hierarchy is constant for European and Northern American nations (Leen et al., 2013). With physical and sexual abuse being less prevalent with 6.1% and psychological abuse having the highest lifetime prevalence with 28.7% (Sanz-Barbero et al., 2018). This high lifetime prevalence rate of psychological abuse underlines the need to explore the different aspects and backgrounds of psychological violence so that prevention and treatment programmes can be best designed to improve and safeguard the health and well-being of the population.

Psychological abuse can be divided into multiple subcategories, including acts of manipulation, humiliation, isolation, intimidation, verbal aggression, threats that cause harm or abandonment and invasive monitoring (White et al., 2008). One specific phenomenon of psychological violence that is gaining more and more presence in both the media and science is "gaslighting". Gaslighting refers to a form of manipulative behaviour that is typically hard to detect. It involves a person (referred to as the "gaslighter") trying to manipulate and control their partner's (referred to as the "gaslightee") feelings, thoughts, behaviours, affective state, and even reality-testing and self-perception (Calef & Weinshel, 1981) aiming to make the gaslightee seem or feel crazy (Sweet, 2019).

Because of its covert nature, research on gaslighing is hampered as it is difficult for victims to recognize and perpetrators to acknowledge. Even if gaslighters are aware of their manipulative and controlling behavior, they are unlikely to admit it. This assumption is confirmed by Ferrer-Perez et al. (2020), who argued that social desirability influences the admission of negatively connoted concepts such as gaslighting or other forms of abuse in intimate relationships. Therefore, March et al. (2023) recently suggested to not directly measure gaslighting behavior, but instead the acceptance of such behavior in general interpersonal settings. This way of approaching a sensitive behaviour such as gaslighting by

measuring it's acceptance was previously validated by Leen et al., (2013), who found attitudes toward violence to be one of the most significant predictors of perpetration of abusive behavior in intimate relationships.

Gaslighting has been shown to lead to devastating consequences for sufferers starting with self-doubt and other physical symptoms related to stress, up to depression, anxiety and suicidal ideation (Christensen & Evans-Murray, 2021; Golding 1999). Nonetheless there has been little research done on identifying correlates or predictors of gaslighting behaviour. Moreover, it is not only of interest to investigate gaslighting in intimate relationships, since it also seems to appear in politics, the workplace (Kukreja & Pandey, 2023), friendships, families, and any other setting where there is a power disparity between the parties (Sweet, 2019). Therefore, it is of general interest to explore potential correlates of gaslighting that are relevant for all interpersonal contexts. One such potential variable is the perpetrator's level of self-esteem.

Self-esteem is the total affective perception of one's own importance, value, or worth. This definition supports the notion that assessing one's opinions or attitudes toward oneself indicates one's level of self-esteem. There are several terms for the idea of self-esteem (e.g. self-acceptance, self-regard, self-respect and self-worth), all of which are consistent with the dictionary definition of "esteem," which is attributed to oneself (Blascovich & Tomaka, 1991).

It is known that being gaslighted causes a drop in levels of self-esteem of victims, but no research has yet been perfomed on the role of self-esteem on the perpetrator side of gaslighting. Established risk factors for the acceptance of gaslighting are primary psychopathy, Machiavellian tactics, sadism and narcissism, also known as the Dark Tetrad traits (March et al., 2023). The level of self-esteem could add to this list of risk factors for adopting or accepting this form of abusive behaviour.

Despite the significant progress made in understanding some of the potential predictors of gaslighting acceptance, there remains a notable knowledge gap regarding the role of self-esteem in this context. However, there are assumptions such as that of Spear (2020), who suspects that low self-esteem will strenghten the motivation to gaslight. He claims that a partner who is exposed and consents to the gaslighter's perspective is less likely to bring up emotional or other additional challenges due to the influence of the gaslighting. The gaslighter therefore manages to avoid conflicts and confronation form their partner (Spear, 2020).

Another, indirect, argument for the potential relevance of the role of self-esteem levels in the acceptance of gaslighting, is its close relatedness to vulnerable- and other forms of

narcissism, one of the known risk factors of gaslighting (March et al., 2023). Several studies addionally focussed particularly on the relationship between narcissism and self-esteem. Two opposing positions are taken in these studies, one in which it is assumed that narcissism can be seen as an extreme form of inflated self-esteem (Twenge et al., 2006) and another in which low self-esteem is assumed to correlate with high narcissism and antisocial behavior (Paulhus et al. 2004). A study that supports the positive relation of self-esteem and narcissism was conducted by Hyatt et al., (2004) which found a positive correlation and suggested that self-esteem and narcissism share a fundamental core. Conversely, Kaufman et al. (2018) found a strong negative correlation between self-esteem and vulnerable narcissism, which supports the idea that low levels of self-esteem are associated with higher levels of vulnerable narcissism.

Given the divergent assumptions and findings about the interplay between self-esteem and narcissism, it is difficult to make assumptions about the exact role of self-esteem in the acceptance of gaslighting. However, one potential mechanism that already shed light on the divergence of self esteem relations with narcissisms is dominance. The findings of Brown and Zeigler-Hill (2004) imply that the dominance hypothesis provides a reasonable explanation for the wide range of relationships seen between narcissism and self-esteem measures. They further stated that a self-esteem scale that is linked more strongly with narcissism also tended to correlate more strongly with dominance, and the more that dominance was controlled for, the less variation appeared in narcissism scores. Therefore, a similar moderation or suppressing effect may be observed when considering the need for control as a potential explanation or effect modifier for the relation between self-esteem and the acceptance of gaslighting tactics.

The need for control refers to the people's urge to influence their environment and interpersonal relationships. This need can be due to various drivers, including the desire for power, dominance or the fear of losing control (Gebhardt & Brosschot, 2002). One reason to assume that the need for control may explain the relationship between self-esteem and the acceptance of gaslighting is the research by Dye et al. (2003). They found a strong positive relation between need for control and psychological abuse, which underlines the relevance to investigate if this is also the case for the acceptance of gaslighting as a subcategory of psychological abuse. Considering that manipulation is one of the key features of gaslighting (van Dijk, 2006) and is highly correlated with the need for control, it can be expected that need for control will not only show impacts on psychological abuse but especially on the (acceptance) of gaslighting tactics.

Due to the limited empirical evidence directly linking the need for control to perpetration of gaslighting, only assumptions can be made based on similar constructs of interest. For instance, it can be assuemed that individuals with higher levels of self-esteem may be less likely to engage in gaslighting, as people with a high self esteem may be less likely to engage in maladaptive behaviours in general. However, coupled with a strong need for control, individuals with high self-esteem may paradoxically become more motivated to engage in gaslighting manipulation because of their greater sense of self-worth and confidence in their own perceptions. Still, these interrelations could also take other forms, for example if an individual has a low level of self- esteem they may not be confident enough to question another persons' perception and therefore rather become a victim instead of a perpetrator of gaslighting. But when paired with the need for control such individuals could become more accepting of gaslighting behaviour as they might prefer maladaptive communication styles such as lying and manipulating to explain themselves in agrumenatation instead of choosing open and honest communication.

The objective of the current study is to contribute to a deeper understanding of the psychological mechanisms underlying the acceptance of gaslighting tactics in intimate relationships by exploring the association between self esteem and the acceptance of gaslighting, taking into account the potential role of need for control. For this, it will be first examined if there is a direct correlation between self-esteem and the acceptance of gaslighting. Next, the role of need for control in the relationship between self-esteem and the acceptance of gaslighting tactics will be examined. Thereby, need for control is hypothesized to potentially take two roles, which are either explaining or influencing (Figure 1) the correlation between self-esteem and the acceptance of gaslighting.

Figure 1 Mediation and Moderation

A Schematic Representation of the Potential Correlation Between Self-esteem (DV) and the Acceptance of Gaslighting (IV) with the Need for Control Taking an Explanatory (Mediator) and an Influencing (Moderator) Role.
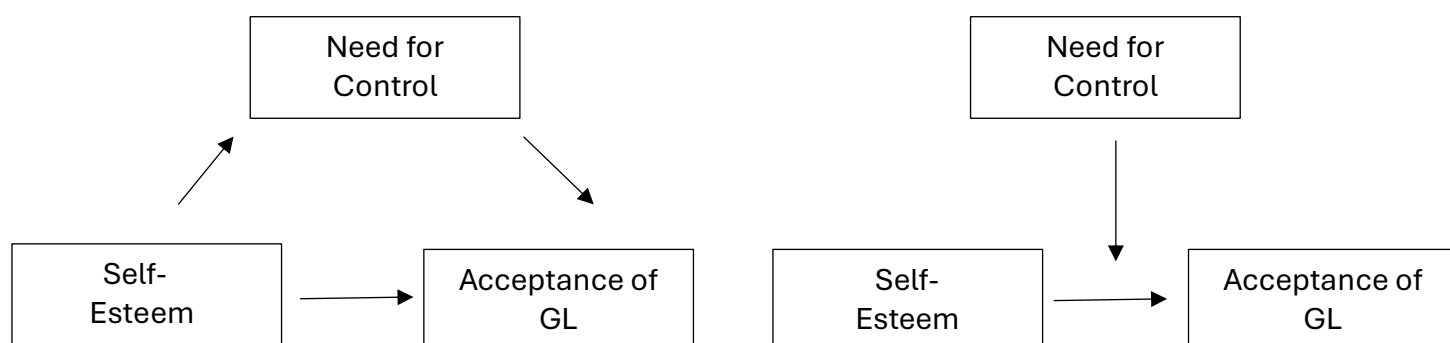
Methods

Design

  The role of need for control in the relation of self-esteem and the acceptance of gaslighting was explored using a cross sectional online survey study performed between the 28th of March and the 22nd of April, 2024. Ethical approval for the survey study was obtained from the Ethics Committee of the Faculty of Behavioral, Management, and Social Sciences of the University of Twente (no. 240367).

Participants and Procedure

  The intended sample size for this study was determined using the pwr package in R, version 4.3.0 (Champely, 2020). To be able to demonstrate an expected medium correlation of $r = .3$ as statistically significant ($p < .05$, two-sided) with 80% power would require at least 84 participants.

  Potential participants were recruited trough convenience and network sampling on social media, as well as through SONA. This choice of sampling was used because of its easy accessability for participants and the possibility to collect data time efficiently. SONA is a web-based research management program, which helps at finding and managing university students that want to participate in studies to get required research credits in reward for their participation. For this study, students were able to receive 0.25 sona credits. At SONA, as well as on social media, participants were provided with a Qualtrics link that led to the survey.

  To be qualified for participation in the survey, proficiency in English at a satisfactory level was required to ensure comprehension and successful completion of the survey. No other strict inclusion or exclusion criteria were employed as everyone has the potential of accepting gaslighting behaviour. While there were no strict age requirements, the final sample only consisted of participants above the age of 18. This is likely due to the used recruitment methods, which primarily targeted university students who are typically adults.

  Participants were asked for active online consent at the beginning of the survey and were allowed to stop at any time without further consequences. The information that was given before asking for consent can be inspected in the Appendix. Participants were also permitted to skip any items they preferred not to answer, ensuring voluntary participation in all responses.

Material and Instruments

The survey was administered in English and consisted of eight distinct blocks, each measuring different constructs and variables with previously validated quesitonnaires, resulting in a total of 167 items. The blocks were randomly assigned within the survey flow and encompassed the following constructs: Gaslighting acceptance, attachment styles, emotional intelligence, self-esteem, need for control, empathy, narcissism, and alexithymia. For this study in particular gaslighting acceptance, self-esteem, and need for control were of relevance. Before filling in the previously mentioned questionnaires, the participants were asked about their demographics and whether they were university students.

The data for this study were collected using the online survey platform Qualtrics (www.qualtrics.com), allowing individuals to participate in the survey using their own electronic devices. It should be noted that the briefing did not explicitly mention that the study measured acceptance of gaslighting, to prevent any potential bias, and rather gave a general description of the study goals at the start of the survey.

Gaslighting Acceptance

The acceptance of the gaslighting tactics in intimate relationships was assessed using the Gaslighting Questionnaire. The questionnaire was developed by March et al. (2023) using previous measures and a review of extant literature and initially consisted of 18 items. The final form of the questionnaire contains the 10 items with the highest factor loading (which accounted for 75.9% of the total variance). The participants were asked to indicate how acceptable they found a set of intimate relationship scenarios, ranging from 0 (*Unacceptable*) to 7 (*Acceptable*). For instance, one item from the questionnaire states: "Person A accuses Person B of lying, even when Person A knows that they are the one who is lying". The total score consists of the sum-score of all 10 items, where higher scores indicate a greater acceptance of gaslighting tactics. Furthermore, the gaslighting questionnaire showed excellent internal consistency (Cronbach's α = .97; March et al., 2023). Cronbach's alpha in the current study was considered good, as it exceeded the threshold of .80 (Cronbach's α = .89), which is widely regarded as indicating good internal consistency (Cicchetti, 1994).

Self esteem

To measure participants' levels of self-esteem, they were asked to fill in the Rosenberg Self-Esteem Scale (RSE). This well-valdiated scale consists of 10 items, 5 of which are negatively formulated. For instance, "I take a positive attitude toward myself" is positively

fomulated and "I certainly feel useless at times", is negatively formulated. Originally constructed as a Guttman-type scale, most researchers use a 4-point response format ranging from "Strongly Disgree" (1) to "Strongly Agree" (4). A total score is calculated by the sum score of all ten items, which are kept on a contiuous scale. This means, that higher scores represent a higher level of self-esteem.

The RSE is considered the standard measure of self-esteem in psychological research due to its conciseness, simplicity, and convenience in assessing global self-esteem (Rosenberg, 1965). The factor structure of the RSE was reported as unidimensional by Hensley (1977), suggesting that it measures a single underlying construct of self-esteem. Fleming and Courtney (1984) reported a 1-week test-retest reliability of .82 for the RSES, indicating its stability over time. Additionally, the internal consistency of the scale was found to be good, with a coefficient alpha of .88 (Fleming & Courtney, 1984). In this study the Cronbach's alpha for self-esteem was excellent at .91.

Desirability of Control

The Desirability of Control Scale (DCS) was used to assess the participants' need for control over various aspects of their lives. The DCS consists of 20 items aimed to measure the extent to which individuals seek control in different situations. Respondents rate their agreement with each item on a 7-point Likert scale ranging from 1 (*the statement does not apply to me at all*) to 7 (*the statement always applies to me*). The need for control is calculated by adding the responses from all items per participant together. The higher the score, the greater is the desire for control of life events.

In this study, question 9: "I enjoy having control over my own destiny", was inadvertently not included in the questionnaire. Therefore, the total scoring was calculated by averaging the item scores on the remaining 19 items, instead of summing item scores. Discriminant validity of the DSC has been established through comparisons with measures of locus of control (Rotter, 1966) and social desirability (Crowne & Marlowe, 1960). Additionally, construct validation was provided through studies examining the illusion of control (el Langer, 1975), learned helplessness, and hypnosis (Burger & Cooper, 1979).The total scale has previously shown good internal consistency (Cronbach's alpha $\alpha = .80$) and adequate test-retest reliability ($r = .75$) (Burger & Cooper, 1979). Cronbach's alpha in this study showed acceptable internal consistency (Cronbach's alpha $\alpha = .74$).

Data Analsyis

The responses were downloaded from Qualtrics and analysed using R Studio (version: 4.3.0 (2023-04-21)). Descriptive statisitics for the acceptance of gaslighting tactics, self-esteem and need for control were conducted by calculating the mean scores and standard deviations. The median calculation was also added to counteract potential skewness in the data. All variables were checked for outliers. The assumption of normality for the three scale scores of interest was evaluated through visual inspection of histograms (Appendix A). In cases where the histograms indicated non-normal distributions, non-parametric Spearman correlations were subsequently computed to determine whether the conclusions regarding the zero-order correlations differed from those obtained using Pearson correlations. The assumptions of homoscedacity, linearity and independence were tested by obtaining a diagnostic plot.

To assess the potential moderating or mediating role of need for control in this potential correlation, the regression-based approach of Hayes (2018) as implemented in the PROCESS function in R was used. This approach has the advantage over traditional approaches, such as those suggested by Baron and Kenny (1986), that the significance of the indirect mediation or moderation effect is statistically tested using bootstrapping, making it more robust against deviations of normality. Specifically, Model 4 of the PROCESS function was used to test for mediation, and Model 1 was used to test for moderation. Bootstrapping in both models was conducted with 5000 samples to estimate 95% confidence intervals. Importantly, the effects were considered significant if zero was not included in the 95% bootstrapped confidence intervals. A p-value of $p < .05$ was deemed significant in all analyses.

Self-esteem was the assumed independent variable and the acceptance of gaslighting was used as the dependent variable. The role of need for control was explored as a moderating as well as a mediating factor. To visualize the moderation effect, simple slopes were calculated at the mean, one standard deviation above the mean, and one standard deviation below the mean of need for control. These slopes were then plotted to illustrate the interaction between self-esteem and need for control on the acceptance of gaslighting tactics.

Results

In total, 145 participants started with the survey. For the current study, all participants which quitted the study after reading the consent or who did not fill in all items of the three questionnaires of interest were exluded. Therefore, the final data set contained 102 participants, of which 31 (30%) were male and 71 (70%) were female. The participants' age varied from 18 to 61 (*M*=25.13, *SD*=7.33). Most participants were from Germany (61%), followed by other

European countries (24%), while the minority was Dutch (15%). Most participants were students (73%) and the median time needed to complete the survey was 19.4 minutes.

Questionnaire Score Distributions

The histograms indicated that the distribution for the variable acceptance of gaslighting tactics was positively skewed, as evidenced by the long tail extending to the right (Figure 2). Self-esteem seemed somewhat skewed to the left and need for control appeared to be approximately normally distributed (Appendix). Additionally, the assumptions of linearity, homogeneity and independence were testet. All assumptions except independence were violated. The diagnostic plots can be inspected in the Appendix.

Figure 2

Histogram of Distribution of Gaslighting Mean Scores
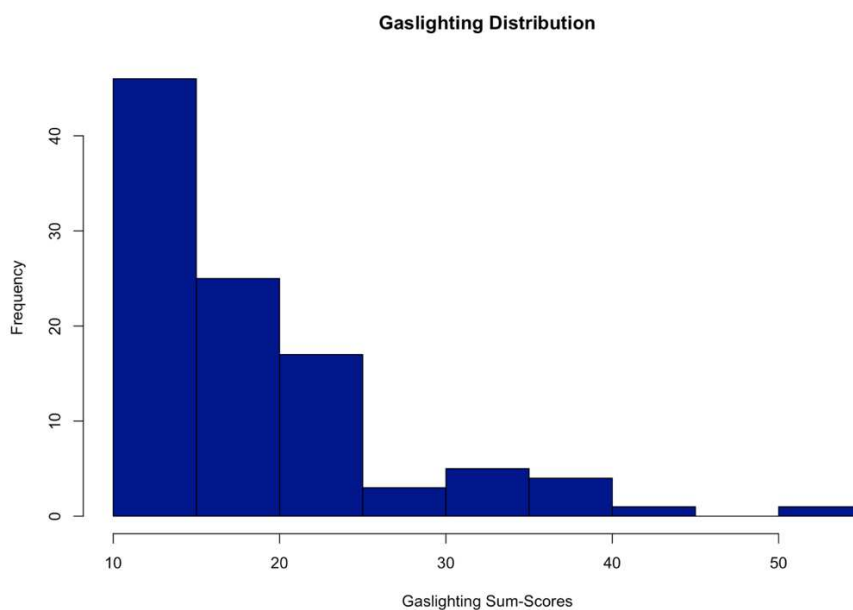
The means, standard deviations, medians and Pearson intercorrelations of the three variables of interest are provided in Table 1. The only correlation that was shown to be significant, was the medium positive correlation of need for control and self-esteem ($p < .001$). Acceptance of gaslighting was not directly correlated with self-esteem nor need for control.

Given that the acceptance of gaslighting tactics showed a non-normal distribution, a non-parametric Spearman correlation was computed to validate the results obtained using the Pearson correlation. The Spearman correlation revealed no other conclusions regarding the zero-order correlations compared to those obtained by using the Pearson correlation.

Specifically, the Spearman correlation between acceptance of gaslighting tactics and self-esteem was .09 (p = .364), and between acceptance of gaslighting tactics and need for control was .08 (p = .450). The significant medium positive correlation between self-esteem and need for control was also confirmed by the Spearman correlation (ρ = .39, p < .01). These results suggest that the use of parametric Pearson correlations was appropriate for this data set, as the Spearman correlation generated consistent findings.

Direct correlations between Self-esteem, Acceptance of Gaslighting and Need for Control

Table 1

Descriptive Statistics and Spearman Correlations for RSE, GLQ and DCS

	M	*SD*	*MDN*	1.	2.	3.
1. Acceptance of Gaslighting Tactics	18.24	8.30	17	(.89)		
2. Self-Esteem	26.86	5.55	26.5	.09	(.91)	
3. Need for Control	4.48	.64	4.48	.17	**.34****	(.74)

Cronbach's alpha is presented in parentheses. RSE = Rosenberg Self esteem scale, GLQ = Gaslighting questionnaire and DCS = Desirability of Control Scale
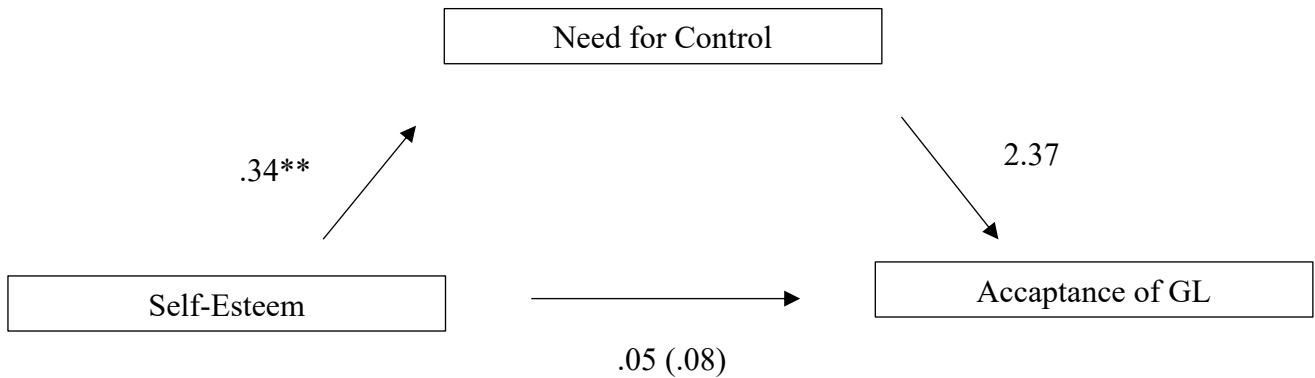
*p < .05

** p < .01

Mediation Analyis. The relationship between self-esteem and the acceptance of gaslighting tactics was further examined by investigating if it was mediated by the need for control. The unstandardized regression coefficient between self-esteem and need for control was statistically significant (b = .34, p = .001). However, the regression coefficient between need for control and the acceptance of gaslighting tactics was not statistically significant (b = 2.37, p = .136). The direct effect of self-esteem on the acceptance of gaslighting tactics was also not statistically significant (b = .05, p = .733). The unstandardized indirect effect of self-esteem on the acceptance of gaslighting tactics through need for control was .08. The 95% confidence interval for the bootstrapped unstandardized indirect effect ranged from -.03 to .21, indicating that the indirect effect was not statistically significant.

Figure 3 Mediation

Unstandardized Regression Coefficients for the Relationship Between Self-esteem and Acceptance of Gaslighting as Mediated by Need for Control

Need for Control

Self-Esteem

Accaptance of GL

.34**

2.37

.05 (.08)

*p<.05

**p<.01

Moderation Analysis.

  The moderation analysis also confirmed the absence of a direct relationship between self-esteem and the acceptance of gaslighting tactics ($b = .0244$, $p = .984$). There was no significant moderation effect by the need for control (interaction effect $= .003$, bootstrapped SE $= 0.14$, 95% bootstrapped CI $= -.274$ to $.280$, $p = .980$).

  The visualization of the simple slopes confirmed that the relationship between self-esteem and the acceptance of gaslighting tactics remained consistent across all levels of need for control. The slopes were very similar and essentially flat, indicating that changes in self-esteem did not significantly predict changes in the acceptance of gaslighting tactics, regardless of the level of need for control (Figure 4). Consequently, need for control does not moderate the relationship between self-esteem and the acceptance of gaslighting tactics, as there is no significant interaction effect.

Figure 4 Moderation

Simple Slopes of Self-Esteem Predicting Acceptance of Gaslighting for 1 SD Below the Mean of Need for Control, the Mean of Need for Control, and 1 SD Above the Mean of Need for Control
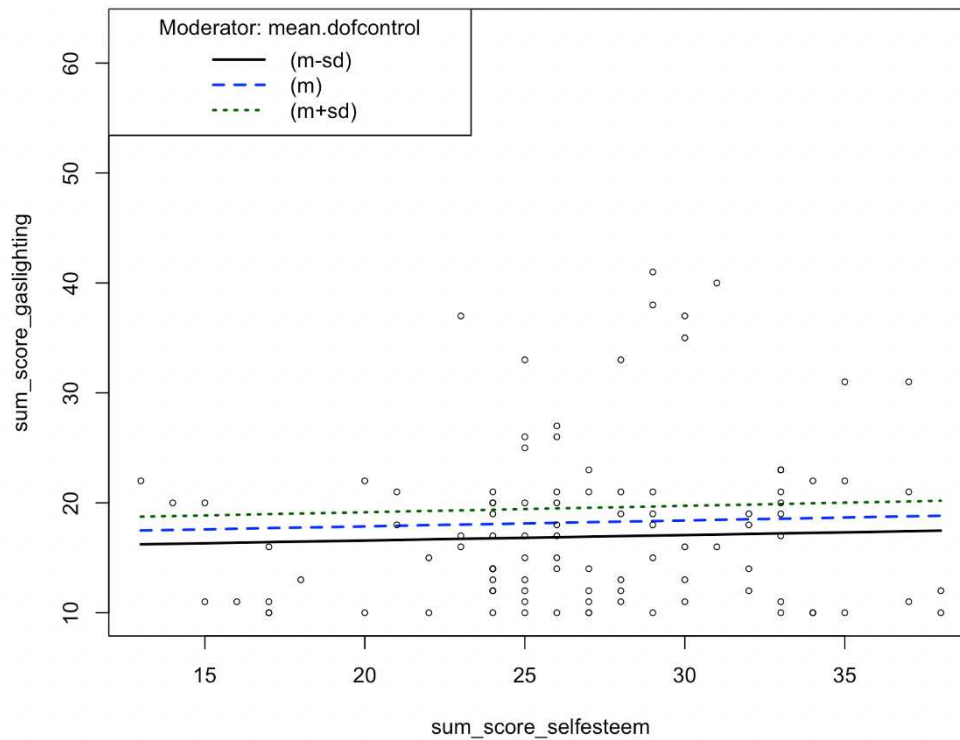
Discussion

This study aimed to investigate the relationship between self-esteem and the acceptance of gaslighting behaviours in intimate relationships, considering the potential mediating and moderating role of the need for control. By exploring these dynamics, this study attempted to identify possible antecedents of gasligthing and thus shed light on the question of why some people are more likely to engage in gaslighting than others. Understanding these dynamics is not only of theoretical interest, but also key for developing effective prevention and intervention strategies to address psychological abuse in intimate relationships.

The initial idea at the base of this study are the research findings of Brown and Ziegler-Hill (2004) which stated that less variation in narcissism scores appeared when dominance was controlled for in the relationship with self-esteem. Further, because of the high correlation between narcissism and the acceptance of gaslighting, the implication was drawn that the same effect that Brown and Ziegler-Hill (2004) found, could appear in the

relation between self-esteem and the acceptance of gaslighting tactics. The current study, however, found that the same effect is not transferable to the relation between self-esteem and gaslighting because the study showed no significant direct association between self-esteem and the acceptance of gaslighting. In addition, need for control could not be verified as neither a moderator nor mediator of this relation.

One reason for the absence of a direct relation between self-esteem and gaslighting, could be the choice of using Rosenberg's Self-Esteem Scale (RSES). The RSES was originally chosen for this study because of its profound validation and established usage in the field of Psychology (Rosenberg, 1965) and considered appropriate for this quantitative type of research study. The RSES is measuring global and explicit self-esteem (Rosenberg, 1965). However, the assessment of contingent self-esteem, an unstable and fluctuating form of self-esteem based on external influences and failures, could have resulted in different outcomes (Barry et. al., 2020). The assumption that self-esteem has a potential relation with gaslighting was based on different research findings that indicated that self-esteem (Hyatt et al., 2004) and gaslighting acceptance (March et al., 2023) show both a connectedness to narcissism. It is often the case for narcissistic personality types to show high explicit- and low implicit self-esteem. The latter, implicit, form of self-esteem was beyond the scope of this type of research, as it would have needed another research setting to promote the use of psychological tests, like an Implicit Association Test (IAT). The IAT could have revealed implicit attitudes and self-esteem that individuals may not be consciously aware of or willing to report explicitly.

Not only self-esteem would have benefited from implicit measurements, but also sensitive topics like gaslighting acceptance itself. The way of assessing gaslighting in terms of measuring the acceptance of gaslighting behaviour, already attempted to prevent socially desirable responses. But in the research by March et. al., (2023), the Marlowe-Crowne Short Form C was additionally checked for and appeared to still explain some variance in the gaslighting responses. Further, as the general self-esteem of the current sample was rather high (Appendix), it can be questioned whether the high levels of self-esteem might have influenced the probability of answering the gaslighting questionnaire socially desirable. Especially because the study by Robins et. al., (2001) discovered that people with high levels of self-esteem tend to respond with higher social desirability. That could have influenced the likelihood of responding with "*Mostly Unacceptable*" even though it might have seemed "*Somewhat Acceptable*" to them.

Comparing the mean score of this study with the the mean score of March et al., (2023) it appears that both studies had a sample that found gaslighting behaviour rather

unnaccaptable, even though the samples of both studies had different demographics. For instance, the sample size in the study by March et al. was three time larger than the sample of this study and the mean age was almost double as high as in this study. That there is a quite similar mean score even though the age group differs, could implicate that gaslighting acceptance is not influenced by age. Nevertheless, in both studies the sample was mainly female and stemming from a western background.

Next to the possible effect of social desirability that might have influenced March's and this study, there could be other reasons that are especially relevant to the sample of the present study. One more general reason could be the recruitment of participants through convenience and network sampling on social media and SONA. These sampling methods led to having a WEIRD sample (Western, Educated, Industrialized, Rich, and Democratic); (Schulz et. al., 2018). In case, the majority of participants were from European countries and mainly university students, which already reflects a certain socio-economic status, as people with lower socio-economic backgrounds have to overcome more obstacles to pursue higher educations (Crawford et al., 2016). In this context, it needs to be highlighted that the demographics of the sample can influence the generalisability of the findings. Therefore, the results of this study need to be considered in the light of particpants' WEIRD background. As there is no research to this day that inspects gaslighting in terms of socio-economic status and cultural differences, there is a need for exploring such possible effects.

Further the recruitment through the SONA system primarily reached students of the social sciences, which might decrease the likelihood of finding gaslighting behaviours acceptable. As learning about social norms and values is a fundamental part of social sciences, it can be assumed that students of this field will find social undesirable and harming behaviours rather unacceptable. This effect was confirmed by Grant (2014), who found that social work students had high levels of empathy and perspective taking. This is why students in this study confronted with the situations presented in the Gaslighting Questionnaire might have felt empathy for the person that is suffering from the behavior, described in the items. However, further research is needed to confirm this assumption.

Apart from their socio-economic and cultural background as well as their field of study, 70% of the sample were female. Therefore, gender might also have influenced why the participants in this study showed rather high *unacceptance* of gaslighting behaviour. According to the study of March et. al., (2023), men found gaslighting tactics more acceptable than women. Also, Sweet (2019) confirmed gaslighting to be a "*gendered phenomenon*".

Thus, gender could serve as an additional explanation for the low gaslighting acceptance in this sample, in addition to the impact that educational background could have.

Turning to the need for control, it did not appear to have a mediating or a moderating effect. Nevertheless, some valuable insights were produced, among them the significant medium positive relation between need for control and self-esteem. The significance of the relation suggests that the missing item on the Desirability of Control Scale did not affect the scale's validity and the overall conclusion of the findings. The finding that a high level of need for control is significantly related to a high level of self-esteem resonates with the research done by Jayamaha & Overall (2015), who showed that partners with low levels of self-esteem were less successful in controlling behaviours.

Similar to the RSES, the choice of using the Desirability of Control Scale (DCS) could be reconsidered in future research. One possible assumption that can be made on the base of the significant relation, is the possible role that the phrasing of some items in the DCS plays. Some items can be viewed from a self-determination perspective, e.g. the statement "When I see a problem, I prefer to do something about it rather than sit by and let it continue." This phrasing emphasizes a proactive personality and personal initiative behaviour which is highly valued in university students (Ball, 2007). And, as mentioned above, participants with high self-esteem are likely to respond socially favorable. In the case of university students, qualities such as leadership and proactive problem-solving can be considered as socially desirable, which could explain a bias in the participants' answers. (Ball, 2007; Klegeris et. al., 2017).

With regard to the relation between need for control and gaslighting, this study found that the need for control did not affect the acceptance of gaslighting. This stands in contrast to March et al. (2023), who found a strong relationship between both controlling behavior and gaslighting acceptance. This can be traced back to a difference in measurements as March et al. (2023) measured controlling behvaiour in intimate relationships, whereas this study measured it as a global personality trait. Therefore it can be assumed that if the results of this study are being replicated with the same outcome, that there is a difference between general personality characterisitics and relationship-specific personality characteristics.

If this study is going to be interpreted or replicated, there are different strengths and limitations that need to be taken into consideration. First, all measurements used in this study have shown to have acceptable to excellent internal consistency reliability and were well established, validated Questionnaires. Additionally, using Hayes' PROCESS function in R

provided a reliable estimate of the mediation and moderation significance. Nevertheless, all three variables of interest were assessed by self-report measurements, implying biases such as social desirability. Future research should consider the use of implicit measurements for variables such as implicit self-esteem that might be unconsciously driven or socially sensitive topics like the acceptance of gaslighting. Furthermore, the results of this study need to be interpreted in the light of the characterisitics of its sample, which predominantly has a WEIRD backgroundand mainly consists of studying females in their middle twenties. Therefore, future research should also attempt to investigate a sample that has a more diverse socio-economic and cultural background,as well as representing different genders and age groups equally. That could make the findings of this study more adequately generalisable. Finally, it should be highlighted that the Gaslighting Questionnaire by March et al. (2023) aligns with a specific type of gaslighter, namely the intimidator gaslighter. This type of gaslighter appears to control its victim through disapproval and criticism. Therefore, it is highly recommended to create questionnaires that also capture other forms of gaslighting, e.g. glamour gaslighting, to achieve a more comprehensive picture about gaslighting and its antecedence.

Based on the results of this study, there are several implications for health care practice that could be drawn. In the first place, self-esteem (RSES) and need for control (DCS) both do not add to the list of risk factors for the development or adoption of gaslighting behaviour. Further, this research possibly opened the discussion whether there is a difference in general personality characteristics and relationship specific characteristics. That would imply that having a high need for control generally (e.g. at work) is different to having a high need for control in an intimate relationship. These research findings invite researchers and healthcare professionals to delve deeper into the complex ways in which intimacy shapes behaviour to ensure that therapeutic interventions are as nuanced and complex as the relationships they are intended to heal. In this context, an interesting question for future investigations could be: Does intimacy awaken another 'monster' within us that lies sleeping in other areas of our lives?

In summary, the current survey study neither found a significant direct relationship between self-esteem and the acceptance of gaslighting behaviours in intimate relationships, nor a mediating or moderating role of need for control in this relationship. The findings underscore the importance of exploring other potential correlates as well as alternative

measurement tools and sampling techniques to better understand the complexities of psychological abuse, such as gaslighting. Additional research could investigate alternative measures of self-esteem and sensitive behaviours such as gaslighting. By deepening our understanding of these dynamics, it may be possible to develop more effective prevention and intervention strategies to address intimate partner violence and promote healthier relationship dynamics in society. Further research is crucial to determine whether the observed lack of a significant relationship is due to methodological factors or if it accurately reflects the nature of the relationship between self-esteem and gaslighting.

Reference List

Anderson, D. K., Saunders, D. G., Yoshihama, M., Bybee, D. I., & Sullivan, C.M. (2003). Long-term Trends in Depression among Women Separated from Abusive Partners. *Violence Against Women, 9*(7), 807-838. https://doi.org/10.1177/1077801203009007004

Ball, S. (2007). Leadership of Academics in Research. *Educational Management Administration & Leadership*, *35*, 449-477. https://doi.org/10.1177/1741143207081058

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173–1182.

Barry, C. T., McDougall, K. H., Anderson, A. C., & Bindon, A. L. (2018). Global and contingent self-esteem as moderators in the relations between adolescent narcissism, callous-unemotional traits and aggression. *Personality and Individual Differences, 123*, 1-5. https://doi.org/10.1016/j.paid.2017.10.036

Brown, R. P., & Zeigler-Hill, V. (2004). Narcissism and the non-equivalence of self-esteem measures: A matter of dominance? *Journal of Research in Personality, 38*(6), 585-592. https://doi.org/10.1016/j.jrp.2003.11.002

Calef, V., & Weinshel, E. M. (1981). Some Clinical Consequences of Introjection: Gaslighting. *The Psychoanalytic Quarterly, 50*(1), 44-66. https://doi.org/10.1080/21674086.1981.11926942

Candelario, S. V. (2023). *The Household as a Human Capital Incubator.* Cambridge Scholars Publishing.

Champely, S. (2020). *pwr: Basic functions for power analysis* [R package]. Retrieved from https://cran.r-project.org/web/packages/pwr/pwr.pdf

Christensen, M., & Evans-Murray, A. (2021). Gaslighting in nursing academia: A new or established covert form of bullying? *Nursing Forum, 56*(3), 640-647. https://doi.org/10.1111/nuf.12588

Cichocka, A., Cislak, A., Stronge, S., Osborne, D., & Sibley. C.G. (2019). Does high self-esteem foster narcissism? Testing the bidirectional relationships between self-esteem, narcissistic admiration and rivalry. *Journal of Research in Personality, 83*. https://doi.org/10.1016/j.jrp.2019.103882

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (Second ed.). Lawrence Erlbaum Associates.

Crawford, C., Gregg, P., Macmillan, L., Vignoles, A., & Wyness, G. (2016). Higher education, career opportunities, and intergenerational inequality. *Oxford Review of Economic Policy, 32*(4), 553-575. https://doi.org/10.1093/oxrep/grw030

Dutton, D. G., & Starzomski, A. J. (1993). Borderline Personality in Perpetrators of Psychological and Physical Abuse. *Violence and Victims, 8*(4), 327-337. https://doi.org/10.1891/0886-6708.8.4.327

Ferrer-Perez, V. A., Bosch-Fiol, E., Ferreiro-Basurto, V., Delgado-Alvarez, C., & Sánchez-Prada, A. (2020). Comparing Implicit and Explicit Attitudes Towards Intimate Partner Violence Against Women. *Frontiers in Psychology, 11.* https://doi.org/10.3389/fpsyg.2020.02147

Gebhardt, W.A., & Brosschot, J. F. (2002). Desirability of control: psychometric properties and relationships with locus of control, personality, coping, and mental and somatic complaints in three Dutch samples. *European Journal of Personality, 16*(6). https://doi.org/10.1002/per.463

Golding, J. M. (1999). Intimate Partner Violence as a Risk Factor for Mental Disorders: A Meta-Analysis. *Journal of Family Violence, 14*(2), 99-132. https://doi.org/10.1023/A:1022079418229

Grant, L. (2014). Hearts and minds: Aspects of empathy and wellbeing in social work students. *Social work education*, *33*(3), 338-352. https://doi.org/10.1080/02615479.2013.805191

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (Second ed). Guilford Press.

Heinrich, J., Heine, S.J., & Norenzaya, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences, 33*(2-3), 61-83. https://doi.org/10.1017/S0140525X0999152X

Herrero, J., Rodríguez, F. J., & Torres, A. (2016). Acceptability of Partner Violence in 51 Societies: The Role of Sexism and Attitudes Toward Violence in Social Relationships. *Violence Against Women, 23*(3). https://doi.org/10.1177/1077801216642870

Hyatt, C.S., Sleep, C. E., Lamkin, J., Maples-Keller, J. L., Sedikides, C., Campbell, W. K., & Miller, J. D. (2018). Narcissism and self-esteem: A nomological network analysis. *PLOS ONE, 13*(8). https://doi.org/10.1371/journal.pone.0201088

Jayamaha, S. D., & Overall, N. C. (2015). Agents' self-esteem moderates the effectiveness of negative-direct partner regulation strategies. *Personal Relationships, 22*(4), 738-761. https://doi.org/10.1111/pere.12108

Kaufman, S. B., Weiss, B., Miller, J. D., & Campbell, W. K. (2018). Clinical Correlates of Vulnerable and Grandiose Narcissism: A Personality Perspective. *Journal of Personality Disorders, 34*(1), 1-10. https://doi.org/10.1111/pere.12108

Klegeris, A., McKeown, S., Hurren, H., Spielman, L., Stuart, M., & Bahniwal, M. (2017). Dynamics of undergraduate student generic problem-solving skills captured by a campus-wide study. *Higher Education*, *74*, 877-896. https://doi.org/10.1007/S10734-016-0082-0

Kukreja, P., & Pandey, J. (2023). Workplace Gaslighting: Conceptualization, Development, and Validation of a Scale. *Frontiers in Psychology, 14.* https://doi.org/10.3389/fpsyg.2023.1099485

Leen, E., Sorbring, E., Mawer, M., Holdsworth, E., Helsing, B., & Bowen, E. (2013). Prevalence, dynamic risk factors and the efficacy of primary interventions for adolescent dating violence: An international review. *Aggression and Violent Behavior, 18*(1), 159-174. https://doi.org/10.1016/j.avb.2012.11.015

March, E., Kay, C. S., Dinic, B. M., Wagstaff, D., Grabovac, B. & Jonason, P. K. (2023). "It's All in Your Head": Personality Traits and Gaslighting Tactics in Intimate Relationships. *Journal of Family Violence.* https://doi.org/10.1007/s10896-023-00582-y

Miano, P., Bellomare, M., & Genova, V. G. (2021). Personality Correlates of Gaslighting Behaviors in Young Adults. *Journal of Sexual Aggression, 27*(3), 1-14. https://doi.org/10.1080/13552600.2020.1850893

Paulhus, D. L., Robins, R. W., Trzesniewski, K. H., & Tracy, J. L. (2004). Two Replicable Suppressor Situations in Personality Research. *Multivariate Behavioral Research, 39*(2), 308-328. https://doi.org/10.1207/s15327906mbr3902_7

Rosenberg, M. (1965). *Rosenberg Self-Esteem Scale.* [Database record]. APA PsycTests. https://doi.org/10.1037/t01038-000

Sağkal, A. S., Özdemir, Y., & Aydoğan, D. (2021). The Brief Partner Behavioral Control Scale (B-PBCS): Development and Validation: Partner behavioral control. *Studia Psychologica*, *63*(1), 77-93.

Sanz-Barbero, B., Pereira, P. L., Barrio, G., & Vives-Cases ,C. (2018). Intimate partner violence against young women: prevalence and associated factors in Europe. *Epidemiology & Community Health, 72*(7). https://doi.org/10.1136/jech-2017-209701

Schulz, J., Bahrami-Rad, D., Beauchamp, J., & Heinrich, J. (2018). *The Origins of WEIRD Psychology.* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3201031

Spear, A. D. (2020). Gaslighting, Confabulation, and Epistemic Innocence. *Topoi, 39*(1), 229-241. https://doi.org/10.1007/s11245-018-9611-z

Sweet, P. L. (2019). The Sociology of Gaslighting. *American Sociological Review, 84*(5). https://doi.org/10.1177/0003122419874843

Tangney, J., Baumeister, R., & Boone, A. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of personality*, *72*(2), 271-324 . https://doi.org/10.1111/J.0022-3506.2004.00263.X

Twenge, J. M. (2014). *Generation Me – Revised and Updated: Why Today's Young Americans Are More Confident, Entitled and More Miserable than Ever Before.* Simon and Schuster.

Tymon, A., & Batistic, S. (2016). Improved academic performance and enhanced employability? The potential double benefit of proactivity for business graduates. *Teaching in Higher Education, 21*(8). https://doi.org/10.1080/13562517.2016.1198761

White, J. W., McMulllin, D., Swartout, K., Sechrist, S., & Gollehon, A. (2008). Violence in intimate relationships: A conceptual and empirical examination of sexual and physical aggression. *Children and Youth Services Review, 30*(3), 338-351. https://doi.org/10.1016/j.childyouth.2007.10.003

Appendix

https://osf.io/f2u3h/