**Investigating the Association between Avoidant Attachment Style and the Acceptance of Gaslighting in Intimate Relationships with the Mediating Role of Alexithymia**

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**Abstract**

To get a better understanding of the potential predictors of gaslighting behaviour, this study aims to investigate whether avoidant attachment style has a positive correlation with gaslighting acceptance and whether alexithymia, and more specifically its three components of difficulty describing feelings, difficulty identifying feelings, and externally oriented thinking can mediate this relationship. A cross-sectional survey study among a convenience sample of 102 participants was conducted. The participants were asked to fill out three questionnaires: the Gaslighting Questionnaire (GQ), the Adult Attachment Questionnaire (AAQ), and the Toronto Alexithymia Scale (TAS-20). Correlation analyses and parallel mediation analysis were performed to test the research questions. The results revealed a weak, significant positive correlation between avoidant attachment style and gaslighting acceptance *(r = 26, p < .01)* measured by Pearson's parametric correlation**.** No significant parallel mediation effects were found for any of the alexithymia components. Based on these results, it can be concluded that insecure attachment styles are indeed positively, but weakly associated with gaslighting acceptance, but this association is not mediated by alexithymia. Future studies should focus on applying alternative measurement tools for alexithymia and gaslighting acceptance to account for the limitations.

*Keywords:* gaslighting, avoidant attachment style, alexithymia

**Gaslighting**

Recent years have seen a rise in popularity of the word 'gaslighting' in public use, especially on social media platforms. According to the Guardian gaslighting was named one of the "buzzwords" of 2018 (Shane et al., 2022). The term that refers to Patrick Hamilton's 1939 play "Gas Light" where a protagonist woman was manipulated by her husband (Candelario, 2023), has turned into one of the most commonly used psychological concepts nowadays (Shane et al., 2022).

Despite the popularity of the term, the concept of "gaslighting" has received little empirical research, and there is no universal conceptualization of it, nor comprehensive data on its prevalence. Gaslighting has been defined as "a pattern of emotional abuse in which the victim is manipulated into doubting their own perception, judgment, or memory" (Candelario, 2023, p.1). Gaslighting behaviour can make the victim believe that their memories or experiences do not exist, leading the victim to feel insecure and uncertain about their sense of reality. Once the person who is being gaslighted starts having doubts, the perpetrator can take advantage of it, by avoiding accountability for their actions and controlling the victim's behaviour (Klein et al., 2023). Thus, as a result of victim's increased self-doubt, the gaslighter can gain even more power in the relationship and use it to their own advantage.

Establishing power, control, and 'destabilizing perceptions of reality' is considered one of the prevalent patterns in such abusive relationships (Hailes & Goodman, 2023). This unequal power balance tends to be also commonly observed and is considered a core feature of intimate partner violence (IPV). IPV labels different forms of abuse, including psychological, physical, and emotional. In IPV literature gaslighting is considered a form of psychological abuse, listed as an instance of coercive controlling behaviour (Klein et al., 2023). Unlike other forms of abuse, gaslighting is often more discrete and operates on a more covert level (March et al., 2023). This characteristic highlights the difficulty for the victim to notice the signs of abuse and seek help, as the very nature of gaslighting can undermine their confidence and trust in their own perceptions and emotions.

Gaslighting in a relationship dynamic can result in a lasting impact on survivors. In such abusive intimate relationships, with time the person who is being gaslighted can become more dependent on their partner because he or she perceives themselves as "crazy" and unreliable. This can happen because of the previously mentioned lack of trust in their perception of reality. Furthermore, a study done by Hailes and Goodman (2023) found that

gaslighting for the victim can be linked to lowered self-esteem, mental health challenges, and negative effects on relationships in the future, as a result of profound confusion and doubt. Despite the increasing societal interest in gaslighting, most of the research on this phenomenon primarily focused on describing the gaslighting behaviours. However, a more detailed understanding of gaslighting can help in recognizing and early detection by the perpetrator's partner the signs of psychological abuse. In the context of IPV prevention, proper education about the signs of abuse is needed as gaslighting for the victim involves a lack of trust in their perception of reality.

As previously mentioned, while most of the studies investigate the behavioural patterns characterizing gaslighting and its consequences for the victim, only a few studies have explored the correlates and predictors of gaslighting behaviours. For example, the study by March et al. (2023) showed the possible association between gaslighting acceptance and Machiavellian tactics and sadism, as well as sex-driven differences indicating that men on average found the gaslighting tactics more acceptable. Another study done by Miano et al. (2021) found that detachment, disinhibition, and psychoticism scores for the abusers were positively related to gaslighting behaviours. This suggests these traits as possible predictors for engaging in gaslighting.

**Avoidant Attachment Style**

One potential correlate of gaslighting behaviours that has not yet been studied is the attachment style of gaslighters. Early life attachment experiences and relationships such as those with family members can have an influence on future relationships as well as affect regulating strategies. Attachment styles studies have shown that the way a child learns how to regulate distressing affects and to relate to people might be influenced by the primary caregiver's sensitivity and responsiveness to the child's emotional states. Studies of adolescents and adults found that those with insecure attachment styles had more deficits in the ability to self-regulate anxiety, depression, and other negative affects. Thus, poor parental bonding can result in perceived difficulty in articulating feelings. (Montebarocci et al., 2004) People characterized by an avoidant attachment style tend to feel uncomfortable when they find themselves close to others and have difficulty trusting others completely (Fantini-Hauwel et al., 2012).

From the attachment theory framework perspective, violent and abusive behaviours can serve the same function as non-violent behaviours namely, to regain and maintain one's

desired closeness and intimacy with the other person (Tinkoff, 2021). These individuals may perceive their intimate relationships as unsatisfactory, struggle with managing intimacy, and engage in maladaptive coping (Miano et al., 2021). According to Dutton and White (2012), the "attachment insecurity spectrum" (fearful, avoidant, disorganized) can be a major psychological predictor of IPV. It was shown that developing maladaptive behavioural patterns as a response to minimize the negative effects of ineffective caretaking by parents was related to having an insecure attachment style. Another study describes how attachment styles influence internal representations; the cognitive-affective psychological structures that evolve over time and impact one's interpersonal relationships. They may hinder the capacity for effective emotion regulation because of the mistrusting representations and as a result lead to dysfunctional behavioural patterns in relationships (Dutton & White, 2012).

**Alexithymia**

A possible mechanism by which the avoidant attachment style influences gaslighting behaviour might be alexithymia. According to Romeo et al. (2024), insecure attachment styles are negatively correlated to the quality of relationships and are associated with difficulties in recognizing and regulating emotions. Thus, the ability to recognize one's own emotions and articulate them can be connected to poor parental bonding. Emotions can have an adaptive behavioural output as they help with understanding what kind of actions need to be taken, in order to satisfy one's needs. Therefore, the ability to recognize and act upon emotions is crucial for self-regulation purposes (Hogeveen & Grafman, 2021). People scoring higher on alexithymia struggle with recognizing, processing, and regulating emotions. Studies have distinguished: difficulty identifying feelings, difficulty communicating feelings, externally oriented thinking, and constricted imagination processes as core features of alexithymia (Montebarocci et al., 2004). Growing up in environments in which children feel both physically and emotionally insecure, and where expressing emotions is discouraged can lead children to not be able to successfully cope with their emotional states and be uncomfortable experiencing them (Montebarocci et al., 2004). Therefore, alexithymia could be a result of the primary caregiver's neglect or indifference to the child's emotions which may influence what kind of attachment style a child will develop in the future.

This neglect or indifference to the child's emotions can result in the development of an avoidant attachment style in a child. These individuals might have learned to suppress their feelings as a way to protect themselves (Simpson, 1990). Consequently, they may struggle

with avoiding the emotional truth and validating their feelings as they tend to push them away. These characteristics can lead them to avoid excessive intimacy and commitment in intimate relationships (Simpson, 1990). Furthermore, alexithymia has been identified as one of the precursors of gaslighting behaviours identified in abusive partners with dysfunctional strategies on how to manage romantic relationships, emotional dysregulation, and poor conflict management styles. The tendency to control a partner could be explained by the perpetrator's inability to express true affection. (Miano et al., 2021). Thus, exploring the potential mediating role of alexithymia in the association between avoidant attachment style and gaslighting can offer valuable insight.

**Gaslighting Acceptance**

When measuring gaslighting behaviours from the perpetrator's perspective it is important to take into account social desirability bias, people's tendency to present themselves in a more socially acceptable way. Particularly, personality and attitudes self-report assessments have been criticised for their validity due to this phenomenon (Leary & Hoyle, 2013). Gaslighting is widely seen as an undesired behaviour that could result in participants trying to conform to social norms and thus, not being fully honest when answering questions. As directly measuring gaslighting may thus result in a bias (March et al., 2023; Ferrer-Perez et al., 2020), this study will instead measure the acceptance of gaslighting in intimate relationships as a more indirect measure of gaslighting, to account for social desirability bias. The Gaslighting Questionnaire developed by March et al. (2023) measures how acceptable an individual considers a set of gaslighting tactics in intimate relationships. Additionally, the questionnaire has shown convergent validity with a measure of IPV control.

This study aims to investigate whether a more avoidant attachment style is positively associated with the acceptance of gaslighting in intimate relationships and whether alexithymia mediates this relationship. The following research questions are investigated:

1. Is a more avoidant attachment style positively associated with the acceptance of gaslighting in intimate relationships?

2. Does alexithymia mediate the relationship through which an avoidant attachment style is positively associated with the acceptance of gaslighting in intimate relationships?

**Methods**

**Design**

A cross-sectional online survey study was conducted between the 28th of March and the 28th of April 2024 to examine the relationship between the acceptance of gaslighting and its potential correlates and predictors. Prior to the implementation of the study, ethical approval was obtained by the BMS Ethics Committee at the University of Twente (240367). After getting approval, the study was added to the online platform Sona, from which the participants were recruited for four weeks. Sona is used by students to add their research studies and seek participants (other students at the university) who are willing to take part in their study. Additionally, the convenience sample of participants was also recruited through social media platforms. The inclusion criteria for the participants were the proficiency level in English and an age above 18. There were no other exclusion criteria. An a-priori sample size calculation indicated that 84 participants would be required to establish an anticipated medium correlation of $r = 0.3$ between avoidant attachment style and gaslighting acceptance as statistically significant (two-sided p = .05) with 80% power. To calculate the required sample size, R studio software along with pwr library was used.

**Materials and Instruments**

The survey consisted of eight distinct blocks, each measuring different constructs using previously validated questionnaires. The blocks respectively measured the following constructs: emotional intelligence, attachment styles, gaslighting acceptance, self-esteem, desirability of control, empathy, narcissism, and alexithymia. For this study, in particular, gaslighting acceptance, attachment styles, and alexithymia were of relevance. Before filling in the previously mentioned tests, the participants were asked about their demographics, whether they were university students, and if so, what was their field of study. The data for this study were collected using the online survey platform Qualtrics (www.qualtrics.com), allowing participants to participate in the survey using their own electronic devices. The questionnaire was available in English and, in total, consisted of 160 items. The participants were allowed to skip items that they felt uncomfortable answering. However, before proceeding to the next question, they would receive one reminder to answer all the items in case they forgot to do so.

*Gaslighting Acceptance*

The acceptance of the gaslighting tactics in intimate relationships was assessed using the Gaslighting Questionnaire (March et al., 2023). The questionnaire, which consists of 18

items, was developed using previous measures and a review of extant literature. The participants were asked to indicate how acceptable they found a set of gaslighting tactics in intimate relationship scenarios, ranging from 1 (Unacceptable) to 7 (Acceptable). In the final form of the questionnaire, 10 items with the highest factor loading (accounting for 75.9% of the overall variance) were retained. An example of an item from the questionnaire is "Person A accuses Person B of lying, even when Person A knows that they are the one who is Lying". The gaslighting questionnaire has shown very good internal consistency (Cronbach's $\alpha$ = .97; March et al., 2023). To assess the acceptance of gaslighting, this study analyzed total (summed) item scores from the gaslighting questionnaire. Cronbach's alpha in the current study was good ($\alpha$ = .87).

### Attachment Styles

To measure the participant's anxious and avoidant attachment styles, the respondents were asked to fill in the Adult Attachment Questionnaire (AAQ; Simpson et al., 1996). The AAQ consists of 17 items with a 7-point Likert-type response scale (1 = strongly disagree, 7 = strongly agree) and is used to assess how an individual can relate to their romantic partners. Additionally, two dimensions can be distinguished: the degree to which a person exhibits avoidance and the degree to which a person exhibits ambivalence, which refers to the fear of abandonment, loss, and their partner's commitment levels. An example item from the avoidance dimension is "I'm not very comfortable having to depend on other people" and an example from the anxious dimension is "I often want to merge completely with others, and this desire sometimes scares them away". Moreover, items 1, 3, 4, 12, 14, 16, and 17 had to be reversed to obtain a meaningful result. The internal consistency for the avoidant dimension was considered good (Cronbach's $\alpha$ = .70 for men and .74 for women), and so was the internal consistency for the anxious dimension (Cronbach's $\alpha$ = .72 for men and Cronbach's $\alpha$ = .76 for women) (Simpson et al., 1996). To assess the avoidant and anxious attachment style, this study analyzed total (summed) item scores from the anxious and avoidant dimensions of the AAQ questionnaire. Cronbach's alpha's in the current study were .83 for the total score, .78 for the avoidance scale, and .81 for the anxious scale.

### Alexithymia

The last questionnaire used in the current study was the Toronto Alexithymia Scale (TAS-20; Bagby et al., 1994). The TAS-20 assesses an individual's level of alexithymia with

three subscales. In total the questionnaire consisted of 20 items and the respondents were supposed to answer them on a scale ranging from 0 (Strongly Disagree) to 5 (Strongly Agree). The first subscale measures Difficulty Identifying Feelings (7 items) and thus being able to distinguish feelings from bodily sensations of emotional arousal. An example item from this subscale is "I have physical sensations that even doctors don't understand". The second subscale measures the Difficulty Describing Feelings (5 items) with an example item: "I find it hard to describe how I feel about people", while the last one measures the extent of Externally Oriented Thinking (8 items) reflecting one's preference for external details rather than content related to feelings. Here, the example item was "I prefer talking to people about their daily activities rather than their feelings". To assess alexithymia, the total (summed) item scores from the subscales were analyzed. The total TAS-20 has shown good internal consistency (Cronbach's $\alpha$ = .81), and so did the three subscales of the questionnaire: difficulty describing feelings ($\alpha$ = .78), difficulty identifying feelings ($\alpha$ = .75), and externally oriented thinking ($\alpha$ = .66) (Bagby et al., 1994). Cronbach's alpha of the total scale in the current study was good at .84. The Cronbach's alpha was also good for difficulty describing feelings ($\alpha$ = .82) and difficulty identifying feelings ($\alpha$ = .80), but inadequate for externally oriented thinking ($\alpha$ = .55).

**Procedure**

Before filling in the survey, the respondents were informed about their rights and the procedure of the study. This included the possibility of withdrawal at any time, anonymity, and permission to archive their responses in a database. The consent-related questions and study information were provided as the first items on the questionnaire. After obtaining all the information, the participants gave their active informed consent to participate in the study by clicking on the answer 'Yes' to the questions about informed consent. To prevent any potential bias the information given did not explicitly mention that the study measured acceptance of gaslighting, but rather gave a general description of the study objective which was investigating the relationship between different personality styles and attitudes, and analysing emotional intelligence, attachment styles, self-esteem, empathy levels, and the ability to recognize and verbalize one's own emotions. The sampling method of this study was a convenience sample. The participants filled in questionnaires about the acceptance of gaslighting, emotional intelligence, attachment styles, self-esteem, the desirability of control, empathy, narcissism, and alexithymia, with a total of 160 questions. Once the survey was

completed, the participants who were recruited through the SONA platform received research participation credits for participating in the study.

**Statistical analysis**

To analyze the results of this study, the R Studio software was used. The responses from the survey were checked for missing responses. In total, 45 of the participants were excluded from the current analysis due to missing responses on one or more of the three questionnaires of interest or variances equal to 0 on TAS-20 (2 respondents). Descriptive statistics were computed, including summarizing the scale scores using mean and standard deviation. The assumptions for Pearson's correlation and mediational analysis were checked, which indicated that the normality assumptions were violated for the gaslighting acceptance scores because of the right-skewed distribution. Nonetheless, the assumptions of homoscedasticity, and linearity for Pearson's correlation and mediation analysis were met, as well as, the multicollinearity assumption for the parallel (multiple) mediation analysis.

To answer the first research question Pearson's correlation between avoidant attachment style and the acceptance of gaslighting was computed. To account for the violation of the normality assumption, an additional Spearman's non-parametric correlation was computed. To answer the second research question, mediation analysis was performed. The mediation analysis was performed using the regression-based approach developed by Hayes (2018) using the PROCESS function for R. Hayes' mediation method is based on the bootstrapping technique which forms a new sample for each repeated sampling, and then calculates the indirect (mediational) effect as the product of the paths a and b. In the current analysis, this process is repeated 10000 times. For the indirect effect to be significant, zero should not be included between the upper and lower limits of the 95% confidence interval of the indirect effect. This approach has several advantages over the other traditional approach to mediation analysis, as suggested by Baron and Kenny (1986), which rely on the assumption that the indirect effects follow a normal distribution. That is why Haye's method is preferred, as it does not have normality assumptions of the data distribution (Prado et al., 2014). The parallel (multiple) mediation analysis with difficulty describing feelings, difficulty identifying feelings, and externally oriented thinking simultaneously entered as mediators (model#) was performed on the relationship between avoidant attachment style and gaslighting acceptance. The theoretical model for this parallel mediation can be seen in Figure 1.

**Figure 1**

*Theoretical model of the parallel mediation.*
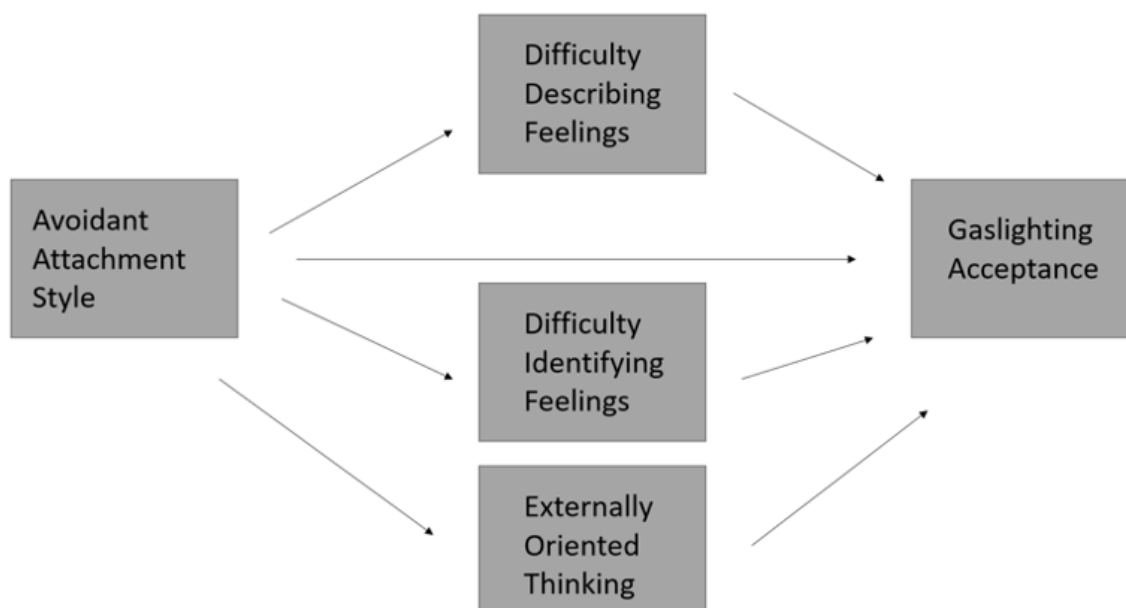


*Note.* The figure represents the theoretical model of the parallel mediation with avoidant attachment style as an independent variable, gaslighting acceptance as a dependent variable, and difficulty describing feelings, difficulty identifying feelings, and externally oriented thinking as mediators.

## Results

### Participants

The sample remaining for the analysis consisted of 102 participants. The final sample included 85 university students and 17 non-students. Among the participants who studied at the university, 56 were psychology students, and 29 were non-psychology students who pursued studies in fields ranging from Law and Biology to Business and Engineering. The majority of the participants were female ($n_{female} = 72$, $n_{male} = 29$, $n_{other} = 1$) and German ($n_{german} = 61$, $n_{dutch} = 16$, $n_{other} = 25$). Other participants were from The Netherlands, Finland, Poland, Spain, the United States, Vietnam, Taiwan, Belgium, France, Canada, and Italy. The age within the sample size ranged from 18 to 66 ($M_{age} = 24.78$, $SD_{age} = 6.92$).

The descriptives for the AAQ, GQ, TAS-20 and its subscales scores can be seen in Table 1. Except for gaslighting acceptance score all scale scores were reasonably distributed.

The histogram of the right-skewed gaslighting acceptance scores distribution can be seen in Figure 2.
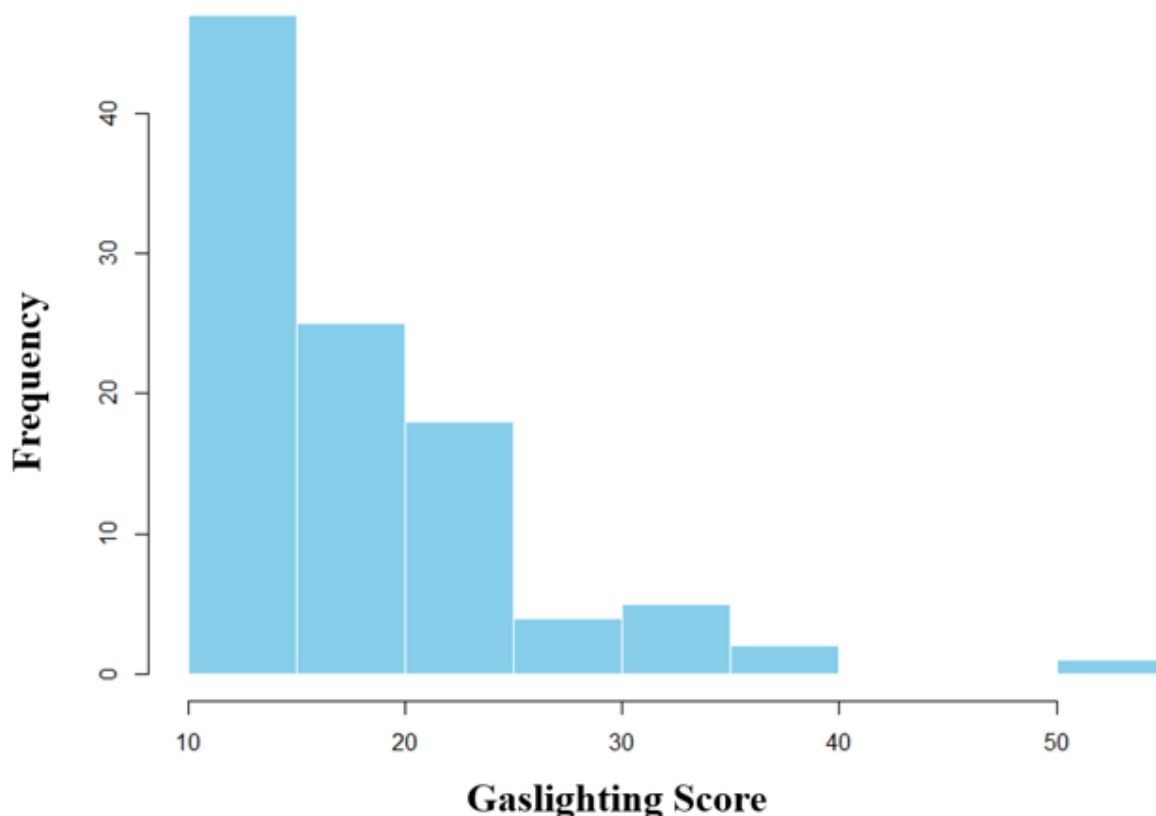
**Table 1**

Descriptives for AAQ, GQ, TAS-20, and subscales: Avoidance Scale, and Anxiety Scale from AAQ, and Difficulty describing feelings, Difficulty identifying feelings, and Externally oriented thinking from the TAS-20.

|  | *N* | *M* | *SD* |
|---|---|---|---|
| AAQ | 102 | 60.71 | 10 |
| Avoidance Scale | 102 | 30.82 | 6.97 |
| Anxiety Scale | 102 | 29.88 | 6.27 |
| GQ | 102 | 17.64 | 7.52 |
| TAS-20 | 102 | 58.40 | 7.84 |
| Difficulty describing feelings | 102 | 13.68 | 2.93 |
| Difficulty identifying feelings | 102 | 15.19 | 4.87 |
| Externally oriented feelings | 102 | 27.44 | 2.99 |

*Note.* N = number of participants, M = mean, SD = standard deviation, AAQ = Adult Attachment Questionnaire, GQ = Gaslighting Questionnaire, TAS-20 = Toronto Alexithymia Scale.

**Figure 2**

*Histogram of the Gaslighting Questionnaire scores.*



*Note*. This figure presents the histogram with the distribution of the Gaslighting Questionnaire scores.

**Correlation analyses**

Pearson's correlation (Table 2) between avoidant attachment style and gaslighting acceptance scores was significant and positive, although weak in size ($r(100) = 0.26$, $p < .01$, 95% CI [0.07, 0.44]). The correlation between anxious attachment style and gaslighting acceptance score was also significant, positive, and moderate in size ($r(100) = 0.3$, $p < .01$, 95% CI [0.11, 0.47]). The results from Pearson's correlation between avoidant attachment style and gaslighting acceptance can also be seen in Figure 3.

**Table 2**

Means, standard deviations, and Pearson's correlations

| Variable | M | SD | 1 | 2 |
|---|---|---|---|---|
| 1. Avoidant attachment | 30.82 | 6.97 | | |
| 2. Gaslighting acceptance | 17.64 | 7.52 | 0.26** | |
| 3. Anxious attachment | 29.88 | 6.27 | 0.14** | 0.30** |

*Note.* M and SD are used to represent mean and standard deviation, respectively.

* indicates $p < .05$. ** indicates $p < .01$

**Figure 3**

*The correlation between avoidant attachment style and gaslighting acceptance.*
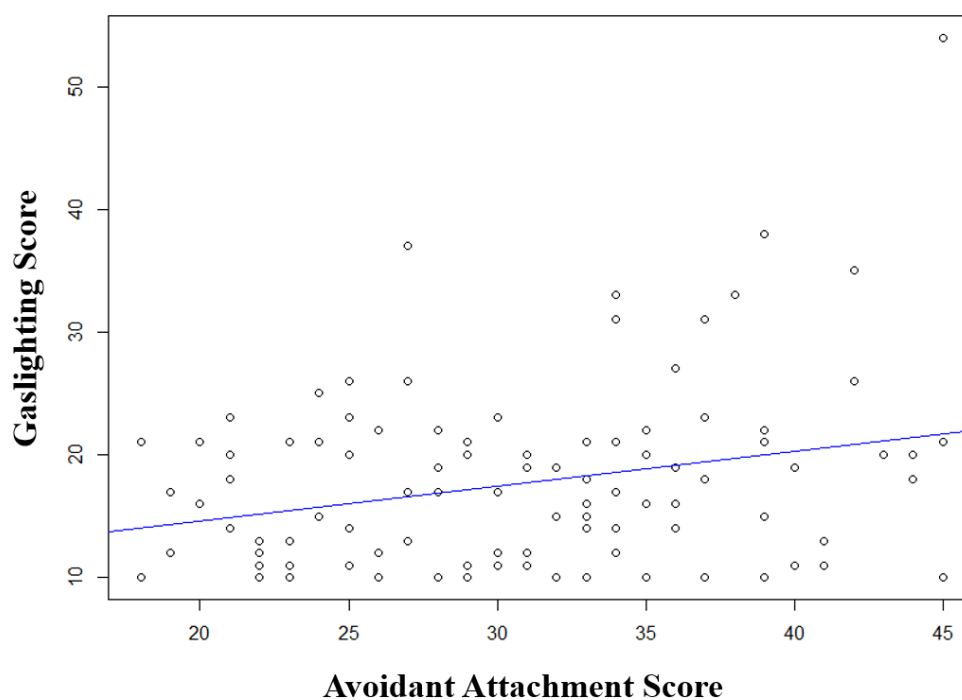


*Note.* This graph represents a positive correlation between avoidant attachment style and gaslighting acceptance.

Because of the non-normal distribution of the gaslighting acceptance scores, an additional Spearman correlation was computed. Spearman's rank correlation also revealed a positive correlation between avoidant attachment style and gaslighting acceptance ($r(100) =$ .17, $p =$ .084), however somewhat weaker in size and statistically insignificant.

**Parallel Mediation Analysis**

A parallel mediation analysis was conducted to examine the mediating effect of difficulty describing feelings, difficulty identifying feelings, and externally oriented thinking on the relationship between avoidant attachment style and gaslighting acceptance. The total indirect effect of the model was found to be not statistically significant (b = 0.0443, SE = 0.0435, 95% CI [-0.302, 0.14]). The individual indirect effects for difficulty describing feelings (b = 0.0350, SE = 0.0474, 95% CI [-0.0369, 0.14]), difficulty identifying feelings (b = -0.0068, SE = 0.0349, 95% CI [-0.0926, 0.05]), and externally oriented thinking (b = 0.0162, SE = 0.0244, 95% CI [-0.0227, 0.07]) were also all insignificant. These results suggest that difficulty describing feelings, difficulty identifying feelings, and externally oriented thinking do not mediate the relationship between the independent and dependent variables. The results of the indirect effect(s) can be seen in Table 3.

**Table 3**

*Indirect effect(s) of the parallel mediation.*

|  | Effect | Bootstrapped SE | Bootstrapped LLCI | Bootstrapped ULCI |
|---|---|---|---|---|
| TOTAL | 0.0443 | 0.0435 | -0.0302 | 0.14 |
| Difficulty describing feelings | 0.0350 | 0.0474 | -0.0369 | 0.14 |
| Difficulty identifying feelings | -0.0068 | 0.0349 | -0.0926 | 0.05 |
| Externally oriented thinking | 0.0162 | 0.0244 | -0.0227 | 0.07 |

*Note.* The table presents the total indirect effect and the individual indirect effects of the difficulty describing feelings, difficulty identifying feelings, and externally oriented thinking from the parallel mediation. LLCI = Lower Limit of Confidence Interval, ULCI = Upper Limit of Confidence Interval.

## Discussion

This study aimed to investigate whether avoidant attachment style and gaslighting acceptance in intimate relationships are positively associated and whether alexithymia can mediate that relationship. The findings revealed a weak but significant positive correlation between avoidant attachment style and gaslighting acceptance, as measured by Pearson's correlation. This association was not mediated by any of the aspects of alexithymia.

Pearson's correlation revealed a significant positive relationship, which was rather weak in the effect size. This answers the first research question and confirms the expected positive association between avoidant attachment style and gaslighting acceptance. The rather weak size of this relationship suggests that there are possibly other factors that explain gaslighting acceptance or moderators that influence the relationship. Additionally, the gaslighting acceptance scores were skewed to the right, which could suppressed the size of the Pearson's correlation coefficient. Because the assumption of normality for gaslighting acceptance was violated, Spearman's correlation was also performed as it is a more conservative non-parametric measure and does not assume that data is normally distributed. This test, however, gave an even lower and non-significant correlation value, indicating a non-consistent monotonic relationship. Overall, this suggests that there likely is a positive association between the two variables, although quite weak at the group level.

Interestingly, although not an a-priori research questions, Pearson's correlation analysis suggested that there was another significant positive correlation with gaslighting acceptance that had a slightly higher coefficient than the avoidant attachment style namely, the anxious attachment style. Here Pearson's correlation was moderate in effect size at 0.3. Dutton and White (2012) have pointed out that the "attachment insecurity spectrum" can be considered a major psychological predictor of IPV. Moreover, exhibiting maladaptive behavioural patterns was shown to be related to the insecure attachment style, which could explain that not only the avoidant attachment style but insecure attachment styles, in general, could be predictors of gaslighting. Although the current study was specifically aimed at examining the role of avoidant attachment style, this study's results could be a starting point to

further explore the relationship between insecure attachment styles, gaslighting acceptance, and manipulation techniques.

The parallel mediation analysis which was performed to test whether difficulty describing feelings, difficulty identifying feelings, and externally oriented thinking could mediate the relationship between gaslighting acceptance and avoidant attachment style, was found to be non-significant overall. The mediation model confirmed that there was a significant direct effect between avoidant attachment style and gaslighting but a non-significant relationship between any of the mediators and the dependent variable. On the other hand, there was a significant association between avoidant attachment style and two of the mediators: difficulty describing feelings, and difficulty identifying feelings – both scales that measure the affective processes of alexithymia. This can suggest that the attachment style one possesses can have an influence on emotional functioning and the use of underdeveloped emotion schemas as an emotion regulation strategy (Preece et al., 2017), but in turn this does not affect gaslighting acceptance.

The insignificant indirect effects observed in the current study could be potentially explained by the specific measurement instruments used. For instance, the TAS-20 is a standard assessment tool for alexithymia. However, alexithymia is characterized by diminished affective skills which could mean that it would be more difficult for such individuals to evaluate their own affective disturbances (Waller & Scheidt, 2006). Therefore, difficulties assessing one's emotions might have impacted the participant's ability to correctly evaluate themselves. According to Waller and Scheidt (2006), people with alexithymia may also have a tendency towards self-criticism and generally report things in a more negative light, and especially those who score high on difficulty describing feelings and difficulty identifying feelings appear to be more susceptible. As TAS-20 relies on people's beliefs about emotional functioning and their cognitive abilities, it would be beneficial to consider how the tendency towards the negative affect among alexithymic individuals could impact the study results. At the individual level, it is challenging to specify to what extent an individual's score reflects emotional deficits and to what extent it reflects other variables. That is why the use of self-reports, along with performance measures, expert judgments, and collateral informants' ratings, is recommended. Incorporating multiple measurement tools can help with discriminating alexithymia from other variables (Lumley, 2000).

The sample size characteristics also need to be taken into account, as this study's participants were mainly students from Western societies. Although the study fields were

rather diverse, a little more than half of the sample consisted of psychology students who might be more aware of certain psychological concepts, especially regarding gaslighting and other constructs being measured during this study. Therefore, these specific characteristics of the sample size might have impacted the responses on the questionnaires and left little room for cultural diversity, making it highly influenced by Western society's cultural norms. These norms might have impacted the study especially in the case of gaslighting in intimate relationships, as the acceptance of certain behaviours might differ among cultures. According to National Academies of Sciences, Engineering, and Medicine (2018) social norms can be seen as rules of behaviour that people use to navigate their actions accordingly to what is seen as desirable and acceptable in their reference group. These norms can also influence the way violence is either fostered or mitigated in a particular society and which behaviours are perceived as less or more harmful. Social norms impact the way how an individual reacts to violence (National Academies of Sciences, Engineering, and Medicine, 2018), which can explain the behavioural differences within societies. This raises a need for a better understanding of how one's environment and culture could influence an individual's perception of which courses of action are seen as acceptable regarding manipulative behaviours.

Overall, the results suggest that even though the observed correlations were very weak, there is a tendency in which higher insecure attachment styles are associated with higher acceptance of gaslighting behaviour. Therefore, future research should further focus on how one's ways of forming an emotional bond within relationships can influence their tendency to engage in manipulative and abusive behaviour in order to protect the victims from potential abuse. Individuals with insecure attachment styles may seek maladaptive strategies to satisfy their distorted needs when being in a relationship which could lead to intentionally or unintentionally harming their partners. More research on predictors of gaslighting is needed as such abuse can have a lasting impact on the survivors (Hailes & Goodman 2023).

Furthermore, the study revealed a significant association between avoidant attachment style, difficulty describing feelings, and difficulty identifying feelings. This finding could be a starting point for exploring how attachment styles influence emotion processing, as studies have shown that difficulty identifying feelings was linked to somatoform disorders (McHugh & Egan, 2023). People struggling with psychosomatic symptoms might have difficulties with differentiating between separate emotions and rather experience a state of tension. They are also more likely to misinterpret the emotional arousal with symptoms of a disease, and seek

medical advice more often compared to those who have less emotional difficulties (McHugh & Egan, 2023). Furthermore, the lack of emotional self-awareness was linked to poor emotion regulation processes and insecure attachment styles. An avoidant attachement style, in particular, was found to be a dominant strategy when minimizing emotional expression to avoid rejection (McHugh & Egan, 2023). That is why future interventions that focus on educating parents about their emotional states and the way how they influence their children might be useful considerations to prevent future adults from developing psychosomatic disorders and struggles with emotion regulation.

**Limitations**

The parallel mediation that was performed in this study, was shown to be insignificant. However, one of the potential limitations contributing to this could be the inadequate Cronbach's alpha for the externally oriented thinking subscale ($\alpha$=.55). Low reliability could have reduced the statistical power of the study and made it more difficult to find significant results. It could also mean that the subscale might not be accurate when it comes to measuring the intended construct and undermine content validity. Nonetheless, the relationship between avoidant attachment style and two other mediators was also found to be insignificant.

Additionally, this study measured the participant's gaslighting acceptance in intimate relationships, with the self-reported Gaslighting Questionnaire (March et al., 2023). Gaslighting acceptance is a difficult concept to measure as some people might be consciously aware that certain behaviours are unacceptable. But it does not exclude the fact that they actually do accept or even engage in such manipulative behaviours. The social desirability bias and social norms might play a role in this situation as the participants might feel the pressure that there is only one appropriate answer to the items on the questionnaire. This could lead to underestimating the prevalence of socially undesirable attributes (Meisters et al., 2020). There is no assessment tool available yet that could accurately and without biases measure engaging/acceptance of such behaviour. One way how to solve this issue would be to develop an implicit association test (IAT) for gaslighting acceptance to obtain more accurate and less biased results. IAT is used to measure implicit attitudes and automatic associations. Implicit Association Test helps with measuring how strongly correlated two concepts are, under the assumption that when the two associated concepts share the same response, the sorting task will be easier for an individual (Greenwald & Nosek, 2001).

**Recommendations**

Although using the TAS-20 to assess alexithymia is a standard procedure and the questionnaire has its convergent validity and efficiency, it could be also susceptible to a bias (especially among people with negative affect, depression, or anxiety) (Leising et al., 2009). Furthermore, alexithymic individuals might struggle with diminished affective skills, making it difficult for them to correctly evaluate their emotional responses. Therefore, future studies could consider using other non-self-report measures such as The Affect Consciousness Interview (ACI) and The Levels of Emotional Awareness Scale (LEAS). ACI measures an individual's conscious awareness and ability to tolerate and nonverbally express feelings, along with the ability to express inner emotional states. To assess these constructs, the Affect Consciousness Interview uses nine basic affect categories. The LEAS, on the other hand, is composed of 20 emotion-evoking scenarios related to interpersonal experience and emotional responses about self and others. The emotional awareness is assessed by marking and scoring emotion words that are related to self and others (Waller & Scheidt, 2004). These additional measures could help with evaluating one's level of emotional awareness.

Future research could also focus on the role of family in emotion processing and gaslighting. The gaslighting manipulation technique used by a parent can greatly affect a child (Candelario, 2023). Children need their parent's love and attention to consider themselves valuable and worthy of love. However, growing up in a manipulative environment, where parents do not meet the child's needs may result in not trusting one's perceptions and emotions later on in life. When a child cannot trust their perceptions of reality, they can struggle with expressing their own emotions as they learn that what they are experiencing is not valid. This kind of abuse often goes unnoticed as it is difficult to observe it on time. However, without such awareness, this cycle might repeat itself, and the child might end up gaslighting their own children in the future (Candelario, 2023). Furthermore, Oliveros and Coleman (2019) found that emotional regulation difficulties mediated the relationship between family-of-origin violence (the child's exposure to maltreatment as a child) and IPV perpetrated and experiences. Thus, greater family-of-origin violence can predict emotion regulation and IPV. Here, the social learning model can provide a mechanism through which domestic violence can be intergenerationally transmitted.

Another possible enhancement of the study of predictors of gaslighting would be doing an age-comparative study among different generations. This could reveal any potential differences among age groups to see how certain social norms affect the perception of

intimate relationships and the acceptability of behaviours one might exhibit. As the study done by Çelik et al. (2020) mentioned, generations X, Y, and Z differ in the way how they perceive romantic relationships and which values are more important for them. These differences may suggest that there could be a difference in how acceptable different generations find gaslighting.

In conclusion, the findings of the current study have shown that insecure attachment styles, namely avoidant and anxious attachment styles, were positively correlated to gaslighting acceptance. Additionally, none of the alexithymia components mediated this relationship, however, a significant association was found between avoidant attachment and two of the alexithymia components: difficulty describing feelings and difficulty identifying feelings. These findings might be a good starting point in understanding the predictors and correlates of IPV behaviours, and the design of interventions that could target recognizing the signs of abuse and help the victims of psychological abuse.

**References**

National Academies of Sciences, Engineering, and Medicine (2018) "*Addressing the social and cultural norms that underlie the acceptance of violence*": *Proceedings of a workshop in brief.* National Academies Press eBooks. https://doi.org/10.17226/25075

Bagby, R., Parker, J. D., & Taylor, G. J. (1994). The twenty-item Toronto Alexithymia scale—I. Item selection and cross-validation of the factor structure. *Journal of Psychosomatic Research*, *38*(1), 23–32. https://doi.org/10.1016/0022-3999(94)90005-1

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. https://doi.org/10.1037/0022-3514.51.6.1173

Campos, F. R. (2023). The impact of destructive parental relationships on children's mental health. In *Seven Editora eBooks*. https://doi.org/10.56238/innovhealthknow-023

Candelario, S. V. (2023). Gaslighting: the emotional abuse that destroys self-confidence. In *The household as a human capital incubator*. Cambridge Scholars Publishing.

Çelik, E., Bingül, F., & Kaya, M. (2020). Investigation of intergenerational romantic relationship perception. *International Journal of Psychology and Educational Studies*, *7*(3), 194–208. https://doi.org/10.17220/ijpes.2020.03.017

Dutton, D. G., & White, K. R. (2012). Attachment insecurity and intimate partner violence. *Aggression and Violent Behavior*, *17*(5), 475–481. https://doi.org/10.1016/j.avb.2012.07.003

Fantini-Hauwel, C., Boudoukha, A. H., & Arciszewski, T. (2012). Adult attachment and emotional awareness impairment: a multimethod assessment. *Socioaffective Neuroscience & Psychology*, *2*(1), 10744. https://doi.org/10.3402/snp.v2i0.10744

Ferrer-Perez, V. A., Bosch-Fiol, E., Ferreiro-Basurto, V., Delgado-Alvarez, C., & Sánchez-Prada, A. (2020). Comparing Implicit and Explicit Attitudes Toward Intimate Partner Violence Against Women. *Frontiers in psychology*, *11*, 2147. https://doi.org/10.3389/fpsyg.2020.02147

Graves, C. G., & Samp, J. A. (2021). The power to gaslight. *Journal of Social and Personal Relationships*, *38*(11), 3378–3386. https://doi.org/10.1177/02654075211026975

Greenwald, A. G., & Nosek, B. A. (2001). Health of the implicit Association test at age 3. *Experimental Psychology*, *48*(2), 85–93. https://doi.org/10.1026/0949-3946.48.2.85

Hailes, H. P., & Goodman, L. A. (2023). "They're out to take away your sanity": A qualitative investigation of gaslighting in intimate partner violence. *Journal of Family Violence*. https://doi.org/10.1007/s10896-023-00652-1

Hayes, A. F. (2018). *Introduction to Mediation, Moderation, and Conditional Process Analysis, second edition: A Regression-Based Approach*. Guilford Publications.

Hogeveen, J., & Grafman, J. (2021). Alexithymia. In *Handbook of Clinical Neurology* (pp. 47–62). https://doi.org/10.1016/b978-0-12-822290-4.00004-9

Klein, W. B., Li, S., & Wood, S. E. (2023). A qualitative analysis of gaslighting in romantic relationships. *Personal Relationships*, *30*(4), 1316–1340. https://doi.org/10.1111/pere.12510

Leary, M. R., & Hoyle, R. H. (2013). *Handbook of Individual Differences in Social Behavior*. Guilford Publications.

Leising, D., Grande, T., & Faber, R. (2009). The Toronto Alexithymia Scale (TAS-20): A measure of general psychological distress. *Journal of Research in Personality*, *43*(4), 707–710. https://doi.org/10.1016/j.jrp.2009.03.009

Lumley, M. A. (2000). Alexithymia and negative emotional conditions. *Journal of Psychosomatic Research*, *49*(1), 51–54. https://doi.org/10.1016/s0022-3999(00)00161-6

March, E., Kay, C. S., Dinić, 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

McHugh, L., & Egan, J. (2023). Psychological and somatic manifestations of dissociation: The role of childhood trauma, attachment, and alexithymia. *European Journal of Trauma & Dissociation*, *7*(1), 100316. https://doi.org/10.1016/j.ejtd.2023.100316

Meisters, J., Hoffmann, A., & Musch, J. (2020). Controlling social desirability bias: An experimental investigation of the extended crosswise model. *PloS One*, *15*(12), e0243384. https://doi.org/10.1371/journal.pone.0243384

Miano, P., Bellomare, M., & Genova, V. G. (2021). Personality correlates of gaslighting behaviours in young adults. *˜the œJournal of Sexual Aggression*, *27*(3), 285–298. https://doi.org/10.1080/13552600.2020.1850893

Montebarocci, O., Codispoti, M., Baldaro, B., & Rossi, N. C. F. (2004). Adult attachment style and alexithymia. *Personality and Individual Differences*, *36*(3), 499–507. https://doi.org/10.1016/s0191-8869(03)00110-7

Oliveros, A. D., & Coleman, A. S. (2019). Does emotion regulation mediate the relation between Family-of-Origin violence and intimate partner violence? *Journal of Interpersonal Violence*, *36*(19–20), 9416–9435. https://doi.org/10.1177/0886260519867146

Prado, P. H. M., Korelo, J. C., & Da Silva, D. M. L. (2014).Mediation, Moderation and Conditional Process Analysis. Revista Brasileira de Marketing. 13. 04-24. 10.5585/remark.v13i4.2739.

Preece, D., Becerra, R., Robinson, K., & Dandy, J. (2017). Assessing Alexithymia: Psychometric properties and factorial invariance of the 20-Item Toronto alexithymia scale in nonclinical and psychiatric samples. *Journal of Psychopathology and Behavioral Assessment*, *40*(2), 276–287. https://doi.org/10.1007/s10862-017-9634-6

Romeo, A., Benfante, A., Castelli, L., & Di Tella, M. (2024). The role of adult attachment and alexithymia in dyadic adjustment. *Journal of Affective Disorders Reports*, 100743. https://doi.org/10.1016/j.jadr.2024.100743

Shane, T., Willaert, T., & Tuters, M. (2022). The rise of "gaslighting": debates about disinformation on Twitter and 4chan, and the possibility of a "good echo chamber." *Popular Communication*, *20*(3), 178–192. https://doi.org/10.1080/15405702.2022.2044042

Simpson, J. A. (1990). Influence of attachment styles on romantic relationships. *Journal of Personality and Social Psychology*, *59*(5), 971–980. https://doi.org/10.1037/0022-3514.59.5.971

Simpson, J. A., Rholes, W. S., & Phillips, D. (1996). Conflict in close relationships: An attachment perspective. *Journal of Personality and Social Psychology*, *71*(5), 899–914. https://doi.org/10.1037/0022-3514.71.5.899

Stern, R. (2007). *The gaslight effect: How to Spot and Survive the Hidden Manipulations Other People Use to Control Your Life*. Crown Pub.

Tinkoff, C. (2021). *A Phenomenological Study on the Female Experience of Intimate Partner Violence and Its Relationship with Adult Attachment Style, Sense of Self and Lasting Trauma* [Thesis, Alliant International University]. https://www.proquest.com/openview/6dc8efc94480bbd829fe481fbc9abdd2/1?pq-origsite=gscholar&cbl=18750&diss=y

Waller, E., & Scheidt, C. E. (2004). Somatoform disorders as disorders of affect regulation. *Journal of Psychosomatic Research*, *57*(3), 239–247. https://doi.org/10.1016/s0022-3999(03)00613-5

Waller, E., & Scheidt, C. E. (2006). Somatoform disorders as disorders of affect regulation: A development perspective. *International Review of Psychiatry*, *18*(1), 13–24. https://doi.org/10.1080/09540260500466774

**Appendix A**

**The Items of the Questionnaire and R codes**

The items of the three questionnaires namely, Gaslighting Questionnaire, AAQ, and

TAS-20 that were used in this study, along with the R codes used to perform all the analyses,

and informed consent for research study can be found via this link:

https://osf.io/mqs6w/?view_only=a09dba9b5ddf43b48fce7605238fdc19

## AI statement

During the preparation of this work, I (Paulina Wozniak) used Grammarly for spelling and grammar checks, Mendeley and Scribbr as citation managers, R studio for data analysis, and Google Scholar and ScienceDirect as search engines. After using this tool/service, I thoroughly reviewed and edited the content, taking full responsibility for the final outcome.