**Exploring the Moderating Role of Self-Reflection on the Relationship Between Education and Prolonged Grief Disorder**

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**Abstract**

*Objective:* Prolonged grief disorder (PGD) is a mental disorder characterised by persistent distressing emotions and fixation on the deceased, often negatively impacting daily life functioning. The risk factors for PGD remain relatively understudied. However, education level and self-reflection might play a role in developing PGD. Therefore, the aim is to gain more insight into how educational level influences the chance of developing PGD symptoms, and whether self-reflection moderates this association

*Method:* Bereaved people who lost a loved one 3 to 6 months prior to the research conducted three interviews (T1, T2, and T3). PGD symptoms were assessed in all three interviews via the Traumatic Grief Inventory – Clinically administered (TGI-CA). Education level was asked at T1. Self-reflection was assessed at T1 and T2 via the Self-reflection and insight scale (SRIS).

*Results*: Pearson's correlation was conducted to investigate the association between PGD symptoms and education level. A two-model moderation analysis was conducted with education level as independent variable, PGD symptoms as dependent variable, and self-reflection as moderator. The total sample size was 65. Pearson's correlation resulted in no significant effects. The two-model moderation analysis resulted also in no significant effects.

*Discussion:* Education level does not significantly affect PGD symptoms, and self-reflection does not moderate this relationship. Future research with a larger sample size should consider using intelligence instead of education level.


*Key words:* Prolonged Grief Disorder (PGD), DSM5-TR, Self-reflection, Education level

Death is one an inevitable occurrences in life. Worldwide, over 60 million people pass away each year (Ritchie, 2024). This leads to a substantial amount of people who lost their loved one. The death of a loved one is one of the most common, potentially traumatic events, and ultimately leads to the experience of grief. According to Stroebe et al. (2001), grief refers to the emotional reaction following the death of a loved one, encompassing various psychological, social, and physical expressions, including cognitive, behavioural, and physiological responses. It is a universal response that occurs in every age group and culture (Jacob, 1993).

In the process of grief, most people adapt to the loss after a certain amount of time. However, approximately 10 % of the bereaved people experience impairing consequences due to this grief reaction (Bonanno et al., 2002). They experience a high and stable level of grief 6 months after the loss of the loved one (Szuhany et al., 2021). These highly bereaved people have the potential to be diagnosed with Grolonged Grief Disorder (PGD). According to the 5th edition of Diagnostic and Statistical Manual of Mental Disorders, TextRevised (DSM-5 TR; APA, 2022), PGD is characterized by persistent and distressing emotions such as sorrow, anger, bitterness, and a paralyzing fixation on the deceased individual, often accompanied by a profound sense of purposelessness and disruption of one's identity (Prigerson et al., 2021). A period of 12 months must pass before diagnosing one with PGD. However, according to the 11th version of the International Classification of Diseases (ICD-11), a period of 6 months must pass before the diagnosis of PGD (World Health Organization, 2019). Moreover, studies have shown that PGD has a large co-presence with post-traumatic stress disorder, anxiety, and depression (Karatzias et al., 2022). PGD was formerly known as complicated grief and was seen as a subtype of post-traumatic stress disorder (Zachar et al., 2023). Despite a growing body of research, PGD remains relatively understudied due to its recent recognition. Nevertheless, PGD can have a major impact

on one's daily functioning. PGD is characterized by struggles in participating in social or enjoyable activities and a diminished ability to experience positive moods, coupled with intense emotional pain (World Health Organization, 2019). It is therefore vital to investigate more into the aspects of this disorder.

One important aspect of PGD that is currently understudied is its risk factors. Studying risk factors early on can guide interventions by indicating who may need support and when, potentially preventing the development or chronicity of a disorder (Kraemer et al., 1997). Buur et al. (2024) found that factors such as a violent/unnatural death (e.g. suicide or murder), and unexpected death, both had a significant but relatively small association with an increased risk of developing PGD. This is because these factors can lead to traumatic loss. Furthermore, anxious attachment style, which is defined by Buur et al. (2024) as anxiety about being separated from a loved one, and loss of a partner/child, were also shown to have a correlation with developing PGD.

Moreover, another factor that might be interesting to explore further is education level. Education level differentiates from the previously mentioned variables in a way that education focuses on one's individual achievements instead of personal circumstances. A study by Balaj et al. (2024) found that someone in the adult age range with no education has a 24.5 % higher risk of mortality than an adult with at least 12 years of education. This ultimately means that lower-educated people experience more death of loved ones than higher-educated people This makes it a critical element in the study of prolonged grief disorder. Furthermore, Buur et al. (2024) found that lower education levels are a significant predictor of increased PGD symptoms, indicating that lower-educated individuals have a higher chance of developing PGD compared to higher-educated individuals. This means that there is a relatively large number of low-educated people with PGD

compared to high-educated people. Based on the study from Buur et al. (2024), the expectation is that a lower education level leads to higher PGD symptoms.

Besides, the question remains what other factors may contribute to the relationship between education level and developing PGD. One possible factor could be that higher educated people are more likely to use cognitive processing to cope with the loss. Christensen and colleagues (2006) compared the coping strategies among lower- and higher-educated people. They found that lower-educated people are more likely to use avoidant coping strategies and higher-educated people are more likely to use problem-solving coping strategies. Another factor may be that more social resources are used to recover from the recent loss (Boelen et al., 2019). These social resources can enhance the coping process of the bereaved person. However, research has shown mixed results regarding the relationship between higher education and a higher number of social resources (Golding & Báezconde-Garbanati, 1990).

**The moderating role of self-reflection**

Another explanation may be that the concept of self-reflection plays a role. Grant and colleagues. (2002) defined self-reflection as "The inspection and evaluation of one's thoughts, feelings and behaviour." Lew & Schmidt's (2011) research indicated that greater self-reflection is associated with improved academic performance. However, the connection between self-reflection and educational level remains relatively unexplored. Furthermore, self-reflection is an important factor when it comes to mental health. Philippi & Koenings (2014) showed that both a high level of self-reflection and a low level of self-reflection contribute to developing mental health problems. They explained that people with low self-reflection have a lower level of emotion regulation which can lead to mental health problems. However, a high level of self-reflection can lead to over-criticizing oneself, which can likewise decrease one's mental health (Philippi & Koenigs, 2014).

Nevertheless, Lyke (2009) found that the level of well-being was higher among people with a high level of self-reflection, compared to people with medium to low levels of self-reflection. This suggests that self-reflection is a major factor influencing mental health. However, there is an absence of research investigating the relation between self-reflection and PGD. Nonetheless, based on the research of Lyke (2009), I hypothesise that the negative relation between education level and PGD symptoms is stronger when there is a low level of self-reflection rather than a high level of self-reflection.

This research aims to gain more insight into how educational level influences the chance of developing PGD symptoms, and whether self-reflection moderates this association. This was tested with the following two research questions and two hypotheses: *"Is there a significant negative association between lower education levels and higher PGD symptoms?"* with the matching hypothesis: "A lower education level leads to more PGD symptoms." And *"Does self-reflection moderate the relationship between education and PGD symptoms?"* with the corresponding hypothesis "The negative effect of education level and PGD symptoms is stronger when one has low self-reflection rather than high self-reflection"

**Methods**

**Design**

This study is part of a larger randomized control trial which aims to research the extent to which acute grief reactions 3 to 6 months after the loss can predict PGD symptoms 12 months after the loss. First, participants were randomized in a controlled trial and put into two conditions: the ESM-Phase condition and the waiting list condition. The participants of the ESM condition were interviewed at the start (T1), followed by the ESM-phase. At the end of the ESM-phase, another

interview was conducted (T2). The waitlist condition was interviewed at the start (T1), waited 2 weeks and had an extra interview (T1b). Followed by the ESM-Phase and the T2 interview. Furthermore, a final interview was conducted,12-months after T1 (T3; see figure 1). Ethical approval for this phase was obtained from the ethics committee of the University of Twente (ID: 221328).

**Figure 1**

*Study design*
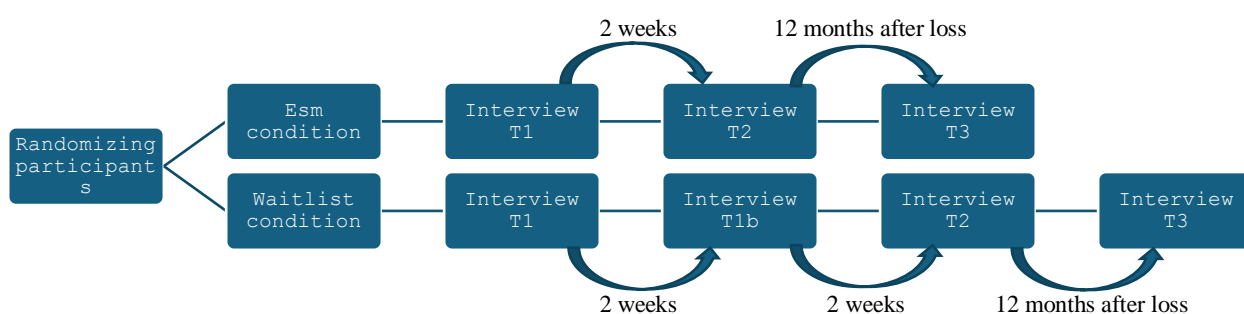


**Participants**

The participants were collect via the website www.rouwbehandeling.nl. This is a website where bereaved people are able to fill in a self-monitoring tool called "Grief monitor" (Lenferink & Boelen, 2023). After filling this in, people were asked about their background information and if they want to engage in future research. The people who confirmed were contacted by the Erasmus University or University of Twente (Lenferink & Boelen, 2023). The inclusion criteria are Dutch speaking adults and lost a loved one 3 to 6 months prior to the T1 interview. Exclusion criteria were ones who were diagnosed with a psychotic disorder or were suicidal (Lenferink et al., 2022). This study uses data that was collected until April 2024.

**Procedure**

People who met the inclusion criteria received a standardized invitation email inviting them to take part in the study. Eligible participants received an invitation email with a Qualtrics link to access the study information and consent forms. Upon agreement, participants were assigned an ID and randomly placed into ESM or waitlist conditions. The initial interview (T1) was scheduled by a phone call. Reminders were sent to those who hadn't filled out the consent form. Interviews, conducted by trained master's students, were followed by scheduling for a second interview within a week post ESM-phase or waitlist period.

During the ESM phase, participants started with self-monitoring via the Ethica app (https://ethicadata.com/). They received five push messages per day over the course of 14 consecutive days. The first alert of the day was randomly scheduled between 8:30 and 9:30 AM, with subsequent alerts occurring every three hours at semi-random intervals (11:30 AM-12:30 PM, 2:30–3:30 PM, 5:30–6:30 PM, and 8:30–9:30 PM; see Lenferink et al., 2022). Once ESM finished, the T1tb interview took place for the waitlist participant and T2 for the ESM participants, both 14 to 21 days after T1. ESM participants finished their involvement after T2, while waitlist participants proceeded with the self-monitoring phase before their T2 interview, marking the end of their participation.

At T3, the participants were asked to participate in another structured interview 12 months after the loss. The participants first received a newsletter containing an explanation of the interview and a notice that they were going to be called soon to plan an interview. One day before the interview, a reminder email was send to the participants. The interviews were conducted via a telephone call. The interviewers were bachelor's and master's level clinical psychology students.

**Measures**

*Background and loss characteristics*

During T1, participants were asked a series of questions pertaining to their background and the circumstances surrounding their loss. Regarding background characteristics, inquiries included gender identification, date of birth, age of deceased, , the cause of death, kinship to the lost one, and history of psychological support.

*Education level*

In T1, the highest level of education attained was recorded with the question: What is the highest level of education you have completed with a diploma? (0 = primary school, 1 = high school, 2 = vocational education, 3 = college, 4 = university).

*Interview-based PGD symptoms (TGI-CA)*

At T3, PGD symptoms were evaluated using the Traumatic Grief Inventory – Cinical Administered  (TGI-CA), a structured interview consisting of 22 items designed to assess PGD symptoms according to the criteria outlined in DSM-5-TR, as well as other conceptualizations of grief disorders (Lenferink, Franzen, et al., 2022). Whether a participant met the requirements for PGD was based on the criteria of the DSM-5-TR (DSM-5-TR; APA, 2020). The TGI-CA serves as the interview-based counterpart to the self-report measure Traumatic Grief Inventory – Self Report Plus (TGI-SR+; Lenferink, Eisma, et al., 2022). The interviewer asked Participants to rate, on a scale ranging from 1 (*Never*) to 5 (*Always*), the extent to which they had experienced each grief reaction over the course of the preceding month (e.g., "In the past month, did you feel alone or detached from others?"; Lenferink et al., 2022). The highest score of question 2 and 8 at the TGI-CA was kept in the data because both items were measuring the same symptom. The

reliability of the TGI-CA and SRIS was examined via Cronbach's alpha. The alpha of the TGI-CA resulted in .83, which can be interpreted as a good reliability.

***Interview based Self-reflection levels (SRIS)***

At T1 and T2, The Self-Reflection and Insight Scale (SRIS; Roberts & Stark, 2008) was administered. The SRIS consists of a 20-item questionnaire, utilizing a 5-point Likert scale (ranging from 1 = *Strongly Disagree* to 5 = *Strongly Agree*) which were conducted via an interview. Questions 1,2, 8, and 13 of the SRIS were reversed score because they were negatively formulated, contrary to the other questions. Furthermore, the SRIS measures three subscales: Engagement in Self-reflection, Need for Self-reflection, and Self-insight. In this study, only the data from the subscale Engagement in Self-reflection and Need for Self-reflection of the participants is used. The Engagement in Self-reflection subscale consist of 6 items. An example item is ("I frequently examine my feelings") The Need for Self-reflection subscale consists of 6 items. An example item is ("It is important to me to evaluate the things that I do").The Cronbach's alpha was tested for the two subscales. Engagement in Self-reflection resulted in an alpha of .83 which can be considered as good reliability. Need for Self-reflection resulted in an alpha of .79 which can be interpreted as Acceptable reliability.

**Data analysis**

R was utilized to analyse the data (R core Team, 2024). First, I analysed the demographic variables, with the range and frequency computed for gender, education level, cause of death, kinship of the deceased, and history of psychological support. Following this, descriptive statistics, including the mean and standard deviation, were calculated for age, age of the deceased, total score of TGI-CA at T1 and T3, and total score of SRIS Engagement and Need for self-reflection. Next, a reliability analysis was conducted, assessing the TGI-CA and the SRIS

for Cronbach's alpha. Addressing the first question "Is there a significant negative association between lower education levels and higher PGD symptoms?" I checked for parametric assumptions first. This was executed via a histogram and a Shapiro-Wilk test to test normality, a Breusch-Pagan test to test for homoscedasticity, and a scatter plot to test linearity. Then, I performed Pearson's correlation to investigate the correlation between Education level and PGD symptoms. The strength of the associations was interpreted using the criteria of Cohen (1988), which states that when the association is significant and r = .10, it is considered small, r = .30 it is considered medium, and when r = .50 it is considered large.

Furthermore, for the second question "Does self-reflection moderate the relationship between education and PGD symptoms?" parametric assumptions were first checked for. This was carried out via a histogram and a Shapiro-Wilk test to examine normality, a Breusch-Pagan test to examine for homoscedasticity, and a scatter plot to test linearity. Then, because the SRIS measured two constructs for self-reflection, I conducted a moderation analysis with two models. Education was the independent variable, and PGD symptoms the dependent variable for both models. For model 1, Engagement in self-reflection, was included as the moderator. In model 2, Need for Self-reflection was included as the moderator. Both education level and self-reflection scores were centered.

## Results

### Background and participant characteristics

The range of the participants age was between 27 and 84 years old (*N* = 65*).* Other background and participant characteristics are described in the table below.

**Table 1**

*Background and participant characteristics*

| Category | Subcategory | Percentage | Number of Participants (N) |
|---|---|---|---|
| **Gender** | Female | 69.2% | 45 |
| | Male | 29.2% | 19 |
| | Other | 1.5% | 1 |
| **Birthplace** | Netherlands | 93.8% | 61 |
| | Germany | 4.6% | 3 |
| | Belgium | 1.5% | 1 |
| **Education Level** | University/Applied Science | 61.5% | 40 |
| | Vocational School | 32.3% | 21 |
| | High School | 6.2% | 4 |
| **Cause of Death** | Physical Illness | 76.9% | 50 |
| | Accident | 6.15% | 4 |
| | Suicide | 6.15% | 4 |
| | Other | 10.8% | 7 |
| **Kinship** | Partner | 53.8% | 35 |
| | Child | 9.23% | 6 |
| | Parent | 29.2% | 19 |
| | Sibling | 1.5% | 1 |
| | Grandchild | 1.5% | 1 |

| | | | |
|---|---|---|---|
| | Friend | 1.5% | 1 |
| | Other | 3.07% | 2 |
| **Psychological Support History** | Received Support | 47.7% | 31 |
| | Did Not Receive Support | 52.3% | 34 |

*Note:* Total number of participants (N) = 65.

## Descriptive statistics

**Table 2**

*Descriptive statistics for study variables*

| | M | SD |
|---|---|---|
| Age | 56.00 | 11.98 |
| Age of the deceased | 62.12 | 19.47 |
| PGD symptoms (T1) | 31.63 | 7.18 |
| PGD symptoms (T3) | 26.51 | 7.68 |
| SRIS - Engagement | 26.97 | 5.70 |
| SRIS - Need | 26.68 | 5.61 |

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

Furthermore, to calculate the amount of participants with PGD, the DSM-5-TR criteria for PGD needed to be met. In the first interview, a total amount of 11 participants met this criteria. In the third interview, a total amount of 3 participants met this criteria.

## Parametric assumption

To analyse the first research question, statistical assumptions needed to be tested first. Normality of PGD symptoms and Education level was tested via the Shapiro-Wilk normality

test. This resulted in a coefficient of .98 and a p-value of .82, which indicates that the residuals are normally distributed. Moreover, linearity was tested via a residual plot (Figure 1), which indicated linearity.

**Figure 2**

*Residual plot of the relationship between PGD symptoms and Education level.*
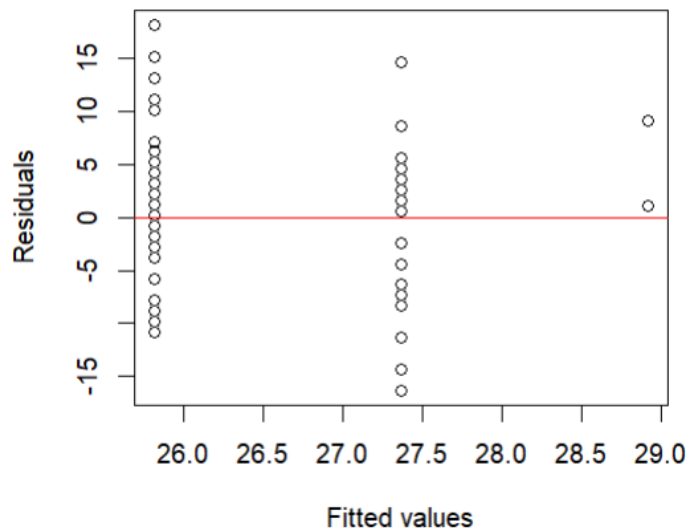


Heteroscedasticity was tested via a Breusch-Pagan test, which resulted in a p-value of .92. This indicated no evidence for heteroscedasticity.

To analyse the second research question, statistical assumptions were tested for both models. The Shapiro-Wilk test was used to assess normality for model 1, resulting in a coefficient of .99 and a p-value of .70, which indicates that the residuals are normally distributed. Heteroscedasticity was tested via a Breusch-Pagan test, which resulted in a p-value of .75. This indicated no evidence for heteroscedasticity. Furthermore, for model 2 Shapiro-Wilk test was used to assess normality, resulting in a coefficient of .98 and a p-value of .61, which indicates that the residuals are normally distributed. Heteroscedasticity was tested via a Breusch-Pagan test, which resulted in a p-value of .96. This indicated no evidence for heteroscedasticity.

**Hypothesis testing**

The first hypothesis was tested via Pearson's correlation

**Table 3**

*Pearson's correlation for PGD-symptoms, Engagement in Self-reflection, Need for Self-reflection, and education level*

|  | Education level | PGD-symptoms | E-SR | N-SR |
|---|---|---|---|---|
| Education level | - | | | |
| PGD-symptoms | -.13 | - | | |
| E-SR | -.21 | -.07 | - | |
| N-SR | .14 | -.12 | .80** | - |

*Note.* \*\**p* < .01 (2-tailed). E-SR = Engagement in Self-reflection, N-SR = Need for Self-reflection.

The correlation between Engagement in self-reflection and Need for self-reflection was strong, positive, and statistically significant. No other correlation between the variables were significant. This means that the first hypothesis can be rejected.

***Moderation analysis***

Then, the second hypothesis was tested via a moderation analysis

**Table 4**

*Model 1: Moderation analysis Education level as the independent variable, Engagement in Self-reflection as the moderator, and PGD symptoms as the dependent variable.*

|  | *B* | *SE* | β | *t* | *p* |
|---|---|---|---|---|---|
| (Intercept) | 24.72 | 0.90 |  | 27.59 | < .001 |
| Education level | -1.40 | 1.50 | -0.12 | -0.93 | .356 |
| Engagement in Self-reflection | -0.06 | 0.17 | -0.05 | -0.34 | .737 |
| Education level * Engagement in Self-reflection | -0.02 | 0.23 | -0.002 | -0.08 | .934 |

*Note. B* = estimate, *SE* = standard error, β = standardized coefficients,

A non-significant effect was found between Education level and PGD symptom. A non-significant effect was found between Engagement in  Self-reflection and PGD symptoms. A non-significant interaction found by Engagement in Self-reflection on Education level and PGD symptoms. This indicated that Engagement in Self-reflection does not moderate the association between Education level and PGD symptoms.

**Table 5**

*Model 2: Moderation analysis Education level as the independent variable, Need for Self-reflection as the moderator, and PGD symptoms as the dependent variable.*

| Model 2 | *B* | *SE* | β | *t* | *p* |
|---|---|---|---|---|---|
| (Intercept) | 24.73 | 0.88 | | 27.95 | < .001 |
| Education level | -1.30 | 1.50 | -0.12 | -0.90 | .371 |
| Need for Self-reflection | -0.14 | 0.16 | -0.11 | -0.85 | .399 |
| Education level * Need for Self-reflection | -0.05 | 0.25 | -0.004 | -0.18 | .857 |

*Note. B* = estimate, *SE* = standard error, β = standardized coefficients,

A non-significant effect was found between Education level and PGD symptoms. A non-significant effect was found between Need for Self-reflection and PGD symptoms. A non-significant interaction found by Need for Self-reflection on Education level and PGD symptoms. This indicated that Need for Self-reflection does not moderate the association between Education level and PGD symptoms. Therefore, the second hypothesis can be rejected.

## Discussion

The aim of this study was to gain a deeper understanding of how educational level predicts future PGD symptoms. In addition, whether self-reflection moderates the relationship between education level and PGD symptoms. The results revealed that education level is not significantly correlated with PGD symptoms. In other words, education level is not associated

with the prediction of future PGD symptoms. Moreover, a two-model (Engagement and need for self-reflection) moderation analysis indicated that self-reflection did not significantly moderate the relationship between education level and PGD symptoms. Namely, self-reflection does not have an influence on the association between education level and PGD symptoms. Hence, both hypotheses can be rejected.

The first hypothesis "A lower education level leads to more PGD symptoms." can be rejected. The outcome of the analysis indicated no significant correlation. These results are not consistent with previous findings. Buur and colleagues., (2024) found a positively significant relationship between education level and PGD, indicating that education level predicts the likelihood of developing PGD. A possible explanation can be the way of sample selection. In the current study, the participants were selected via a random control trial. In the study of Buur et al, the participants are mostly collected via a non-randomly collected sample. A non-randomly collected sample can collected on the basis of convenience or other criteria, which can lead to a different outcome then when the data is collected via a random control trial. Another possible explanation for this difference in results could be a lack of statistical power. Statistical power is the likelihood that a null hypothesis test will detect a statistically significant effect when there is a real effect of a specific magnitude (Baguley, 2004). The statistical power of a study depends on three parameters: the sample size (N), the significance level ($\alpha$), and the standardized effect size (Cohen, 1988). This study had a relatively small sample size of 65. This most likely lead to a decrease in statistical power and therefore a decrease in the likelihood of finding significant effect. Hence, this can be an explanation to the contrast of findings.

The second hypothesis "The negative effect of education level and PGD symptoms is stronger when one has low self-reflection rather than high self-reflection" can also be rejected.

Both engagement and need for self-reflection do not influence the interaction between education level and PGD symptoms. Despite the lack of research that is done on the topic of self-reflection and PGD, this result is still contrary to earlier research. Lyke (2009) found that people with higher levels of self-reflection are more likely to experience higher levels of well-being. Furthermore, Philippi & Koenings (2014) found that both high levels and low levels of self-reflection were significant risk factors when it comes to developing mental health issues. This is again contrary to the results of the moderation analysis. An explanation for this can be that the large majority of the participants finished as their highest education level university or university of applied science. This means that the sample size of the lower educated group was relatively low. According to the rules of statistical power (Cohen, 1988), when the group sample size decreases, the statistical power decreases. Consequently, resulting in a lower likelihood of significant results.

**Strengths**

One strength of this research is the reliability analysis and data collection method used for this research. The TGI-CA 12 months after the first interview revealed a good alpha, as well as the Engagement in self-reflection subsection of the SRIS. The Need for self-reflection subsection scored an acceptable alpha. Furthermore, no items were removed to reach these alphas. In addition, a randomized control trial was used in this research. A randomized control trial helps to reduce bias and is a robust method for examining cause-and-effect relationships. Therefore, this can be considered as a strength of this research.

Another strength of this research is the data collection method. The data was collected via a telephone interview that was conducted by multiple students in the Netherlands. This way of data collection that is done via interview provides a higher validity, because any points of

confusion can directly be resolved by asking a question (Peterson et al., 2017). Hence, this increases the validity of the method and is therefore a strength of this research.

**Limitations**

The first limitation of this research is the sample size. A large sample size leads to an increase of statistical power. As stated earlier, Statistical power is the probability that a null hypothesis test will detect a significant effect when a real effect is present (Baguley, 2004). For an outcome, statistical power depends on three parameters: sample size (N), significance level (α), and standardized effect size. Increasing any of these parameters will enhance the study's power (Cohen, 1988) A larger sample size could in this case have lead to more significant results.

Another limitation regarding this study is the background and participant characteristics. The participants are overrepresented by university educated people who identify as female. Additionally, the large majority lost a deceased from physical illness. This lack of diversity in background and participant characteristics could have led to biased results in the study. Most notably, when one of the variables, education level, is overrepresented by one particular group. Therefore, this can be considered a limitation of this study.

**Recommendations for future research**

The first recommendation is to collect participants who were clinically diagnosed with PGD. In this study, the TGI-CA was used in order to measure PGD. However, a clinical sample would be a more reliable way of researching PGD. Furthermore, more participants with PGD need to be collected. The sample size of participants suffering from PGD in this research was

three. This possibly led to a lack of statistical power, and the analyses conducted in the study resulted in no significant correlation.

The last recommendation is to measure for intelligence instead of education level. Education level is influenced by social economic factors and intelligence. However, Intelligence is a more effective way of measuring cognitive abilities then education level (Israel et al., 2001). Furthermore, a study from Marx et al. (2021) found that intelligence was a better predicter than education level for the outcome of a PTSD treatment. PTSD and PGD are closely related disorders, since they both belong to the stress-response syndromes (Maercker & Lalor, 2012). Therefore, it might be interesting to investigate intelligence as a predictor for PGD.

**Conclusion**

Looking back at the study's aim, we can state that the relationship between education level and PGD symptoms, moderated by self-reflection remains uncertain. The results showed that education level does not predict PGD and self-reflection does not moderate this relationship. These results were contradictory to previous research, likely due to an insufficient sample size. Therefore, a limitation of this research is the small sample size. To address this, future studies should include a larger sample size.

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# *AI STATEMENT*

During the preparation of this work the author used ChatGPT in order to check for spelling and grammar mistakes, as well as possible redundancies in the text. After using this tool, the author reviewed and edited the content as needed and takes full responsibility for the content of the work.