

The effect of a students' locus of control and achievement goals on presentation anxiety

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Abstract

Presentation anxiety is one of the most commonly reported social fears, affecting around 75% of the population (Murali et al., 2021). Certain factors were suggested to have an influence on presentation anxiety. In this study, the effect of a students' locus of control and achievement goals on the anxiety to present was examined in a sample of 144 participants through an online Qualtrics survey experiment. The effect of the external locus of control on presentation anxiety and the effect of performance avoidance goals on presentation anxiety was examined. Furthermore, a mediation analysis was done to check whether the external locus of control mediates the relation between performance avoidance goals and presentation anxiety. The 114 responses were analysed through a descriptive, correlation and regression analysis. According to the results, the external locus of control did have a significant positive effect on presentation anxiety. However, contrary to expectations, performance avoidance goals did not significantly predict presentation anxiety and the external locus of control did not mediate the relation between performance avoidance goals and presentation anxiety. For future research, it was recommended to replicate this study in an experimental setting since self-report measurements have limitations.

The effect of a students' locus of control and achievement goals on presentation anxiety

Presentation skills are regarded as a means of gaining academic and professional success. The rising usage of presenting skills in academic and professional evaluations demonstrates their relevance (Salem, 2019). According to Merz and Wolf, (2015) students who are anticipating the start of their oral presentation in an academic course exhibit common indications of stress, and prior research confirms that giving oral presentations causes significant disparities in anxiety levels and cortisol levels. After students enter the job market, they still suffer from presentation anxiety as a professional, with one study estimating a frequency of up to 35% among professionals (Murali et al., 2021). There is evidence that perceived behaviour control, more specifically, ones locus of control (LOC), impacts students' performance (Fazey & Fazey, 2001). A students' locus of control refers to their attribution of success to either internal or external causes. Moreover, a study shows that a students' achievement goal (AG), which refers to the aim or focus of a students' achievement behaviour, is related to the anxiety to present (Stewart et al., 2021). In particular having a performance-avoidance achievement goal, stemming from the achievement goal theory, is suggested to lead to higher levels of presentation anxiety (Stewart et al., 2021). This calls for further investigation of the effect of locus of control and achievement goals on presentation anxiety in order to aid students that suffer from presentation anxiety, as not much research has been conducted in this field. In this study, the aim is to look into the relation between having performance avoidance goals, an external locus of control and presentation anxiety in order to prove or disprove previous findings.

Target group

Students have been determined to be a relevant target group for the investigation of the anxiety to present, since presentation skills are increasingly used in academic and

professional evaluations (Salem, 2019). Especially the post-covid context of this study makes the target group relevant, as students are recovering from the pandemic. Studies show that the prolonged COVID-19 pandemic had a psychological impact on students. Furthermore, students are in the midst of readjusting to face-to-face interaction which causes anxiety (Hidayah et al., 2022). The relevance of presentation skills for students to succeed and the increasing anxiety caused by the lifting of regulations demonstrate the importance of investigating presentation anxiety in this context.

Presentation anxiety

Anxiety is defined by Gray, (1982) as the activity of the behavioural inhibition system (BIS) caused by the state of the central nervous system. The symptoms caused by an active BIS can be interpreted as an indication of anxious emotion. These symptoms include, amongst others, attention narrowing, the inhibition of gross motor behaviour, increased analysis of stimuli and increased examination of the environment (Chorpita & Barlow, 1998). The cognitive-behavioural theory states that influencing factors of the symptoms of anxiety are a sense of danger and feeling unable to cope with a perceived threat. Individuals will avoid situations that they perceive to be harmful in their minds, such as a situation where they feel embarrassed and judged, and will regard themselves as being unable to handle such a situation (Yee & Abidin, 2014). Furthermore, individuals internalize beliefs about the adaptability of their abilities (Ozdemir & Papi, 2021). These beliefs form a semantic framework through which individuals perceive themselves, their successes, failures and the capacity to develop into something in the future. As a result of an individual's internalized beliefs, they may have a high fear of being perceived negatively by others, which is one of the most common causes of presentation anxiety (Hasibuan et al., 2022).

In this report, a presentation is defined as, a student standing in front of an audience in

an academic setting and delivering a speech in order to inform or persuade their audience in a structured manner (Yee & Abidin, 2014). Furthermore, presentation anxiety is defined as the fear of speaking in front of a group of people and is, therefore, a type of social anxiety (Hasibuan et al., 2022). It has been reported to have an impact on an individual's personal, social, and emotional life (Hasibuan et al., 2022). This might be due to a lack of speaking practice, a lack of mastery of the subject, or a low self-image (Hasibuan et al., 2022). Symptoms of presentation anxiety are, stress, embarrassment, wavering voice, a racing heart, unease, and insecurity (Hasibuan et al., 2022).

Consequently, the anxiousness that follows is a natural reaction to an unpleasant or debilitating atmosphere for the speaker (Kankam & Boateng, 2017). External or situational elements such as the nature of the presentation and the size of the audience, among a host of others, can make a student nervous or anxious during a presentation. This explains the usual differences in a students' performance when presenting. As a result of focusing on external elements rather than the content of the presentation, a student may exhibit indicators of high anxiety when having to hold a presentation that is perceived as scary or unpleasant (Kankam & Boateng, 2017). Anxiety can impair students' ability to demonstrate knowledge and, as a result, could experience more failure, leading to a further increase in anxiety (Ozdemir & Papi, 2021).

Additionally, the anxiety acts as a mental block in the following three cognitive stages, intake, processing and output (Chorpita & Barlow, 1998). This implicates that anxiety arousal may compete for cognitive resources that are required for cognitive processing. As a result, students with the anxiety to present are more likely to perform poorly in any academic or social endeavour (Kankam & Boateng, 2017). Further research suggests that students who suffer from presentation anxiety are more likely to drop out of school, although their grades

would be comparable to students who do not suffer from this type of social anxiety (Kankam & Boateng, 2017). Thus, cognition is an important factor of presentation anxiety.

Locus of control and presentation anxiety

The Theory of Planned Behaviour (TPB) is a cognitive theory in which cognitive-regulation is central to behaviour. Perceived behaviour control, one of its core components, can be divided into an internal and external locus of control (Kiriakidis, 2017). The locus of control refers to the extent to which students perceive their academic success or failure as determined by internal control, such as personal qualities and behaviour, or by external control, which are factors outside their control (Kiriakidis, 2017). The anxiety to present can be brought on by factors both internal and external to the student. Studies have suggested that a lack of good public speaking abilities, foreign language proficiency, and issues with managing ones emotional state are all possible causes of anxiety, which refers to the internal locus of control (Hasibuan et al., 2022). Furthermore, when attempting to present, students are terrified of being evaluated or embarrassed by others, which refers to the external locus of control (Hasibuan et al., 2022). It is reported that the anxiety that is experienced impairs public speaking abilities by interfering with normal linguistic functioning (Hasibuan et al., 2022). Thus an internal and external locus of control is, as supported by evidence, a variable that influences a students' anxiety to present.

Achievement goals, locus of control and presentation anxiety

As studies have shown that achievement goals are related to presentation anxiety, the achievement goal theory will be applied (Stewart et al., 2021; Spielberger, 2004). The theory states that, when involved in tasks, people can be more or less task- and ego-involved. Task-involved goals emphasise learning and improving, whereas ego-involved goals emphasize outperforming others. People vary in their degree of task and ego orientation once they have

reached a certain level of cognitive development in late childhood and beyond (Spielberger, 2004). The four types of achievement goals, namely mastery approach goals, mastery avoidance goals, performance approach goals and performance avoidance goals are described as follows. Students who set mastery approach goals are focused on improving their competence by acquiring new skills and mastering new situations in order to reach success. Students who set performance approach goals are concerned with positive evaluations of their competence and are driven by external factors such as demonstrating their abilities to others and outperforming others. Furthermore, students with mastery avoidant goals focus on avoiding situations in which they are unable to learn, in order to not fall short of mastering a task. And finally, students with performance avoidant goals are focused on avoiding failure in front of others, or avoiding being outperformed by others (Cetinkalp, 2010).

Cetinkalp, (2010) reports that performance avoidance goals are a determinant of an external locus of control. Furthermore, it is reported that performance avoidance goals are related to presentation anxiety, since students with performance avoidance goals have poor task performance, which has been linked to presentation anxiety (Stewart et al., 2021). To the contrary, mastery approach goals and performance approach goals are unlikely to cause presentation anxiety, which is suggested to be caused by a students' motivation to master a task for their own benefit (Stewart et al., 2021). Furthermore, there is no research stating what possible effects mastery avoidance goals might have on presentation anxiety. Thus, within the frame of the present study, performance avoidance goals are suggested to be related to presentation anxiety and this relation might be mediated by an external locus of control (Cetinkalp, 2010; Stewart et al., 2021). Knowing which variables are related to the anxiety to present, especially in the post-covid context, is important as the information could aid in conducting effective interventions for reducing presentation anxiety.

Research question and hypotheses

As there is a consensus that there is no effect of mastery approach goals, performance approach goals and mastery avoidance goals on the anxiety to present, this study will only be focusing on performance avoidance goals, which has been suggested to be related to both the anxiety to present and the external locus of control. The internal locus of control will not be separately used as a mediating variable since there is no research that supports a relationship between an internal locus of control and the separate achievement goals. However, the external locus of control is both related to performance avoidance goals and the anxiety to present, thus the focus will be on the external locus of control. As there is previous literature on the effects of performance avoidance goals and the external locus of control on presentation anxiety, this study aims to prove or disprove previous findings in a post-covid context.

The research question that this report will aim to answer is: How does a students' perceived locus of control and type of achievement goals affect their presentation anxiety? The research question can be answered using the following two hypotheses. (h1) Having an external locus of control is related to a students' experienced presentation anxiety. And, (h2) Having performance avoidance goals is related to a students' experienced presentation anxiety. A positive relationship is expected between an external locus of control and presentation anxiety, as well as for the relationship between performance avoidance goals and presentation anxiety. (Hasibuan et al., 2022; Stewart et al., 2021). Furthermore, it is expected that an external locus of control mediates the positive relationship between performance avoidance goals and presentation anxiety (Stewart et al., 2021). Thus, the third hypothesis is (h3) An external locus of control mediates the relationship between performance avoidance goals and presentation anxiety.

Method

Participants

This study included total of 155 participants, of which 114 responses were used. 41 participants were excluded based on the inclusion criteria being that the participants needed to be a current student and had to have filled in the whole survey. The participants consisted of 30 (26.3%) males and 84 (73.7%) females and were between 17 and 31 years old ($M=21.5$; $SD=2.1$). All participants were studying at an educational institution located in the Netherlands or Germany and the amount of years that the participants had already been a student varied between 1 and 6 years ($M_{yearsstudied}=3$; $SD=1.4$). Furthermore, 34 (29.8%) of the participants had a Dutch nationality, 65 (57%) participants had a German nationality and 15 (13.2%) had chosen "other" (e.g. Polish, Palestinian).

Procedure

The research was approved by the ethics committee of the University of Twente with the following application number, 220389. The data was collect in a joint effort, thus the survey included several blocks which were not subject to the present study. Each participant received a link that directed them to the online survey, or accessed the survey through the link provided by the Sona-system. Through the Sona-system, students obtained 0.25 Sona-credits for filling in the survey. The participants were asked for 15 to 20 minutes of their time to fill in the survey. First, participants were provided with information concerning the nature of the study and asked to provide their informed consent (see Appendix A). Next, the participants were asked to indicate their demographics which consisted of the participants gender, whether they were a student, if they were studying at a university and whether their educational institute was in Germany, the Netherlands or elsewhere. They were then asked for how many years they had been a student, their age and their nationality. This was

followed by the 44 questions related to the research questions, measuring the participants presentation anxiety, locus of control and achievement goals (see Appendix B).

Design

This study was a correlational survey design with the independent variables (IV) external locus of control and performance avoidance goals. Mastery approach goals, mastery performance goals and performance approach goals were also added to the correlation analysis for exploratory purposes. The dependent variable (DV) was presentation anxiety and the mediator between performance avoidance goals and presentation anxiety was the external locus of control.

Materials

Locus of control

To gather the required data, a survey was created with the online survey tool Qualtrics. For this study, the participants were asked to answer the survey with a total of 44 questions (see Appendix B). The external locus of control was measured with the Adult Nowicki-Strickland Locus of Control Scale (ANS-IE), through the following five factors: the inability to protect oneself, social impotence, superstition, futility and persecution. An example item is "Do you feel that when someone doesn't like you there's little you can do about it?" The 15 items were on a four-point Likert scale (see appendix B). No changes had been made to the original items. The reliability of this scale was found to be sufficient ($\alpha = .79$). According to multiple studies, the higher the participant scores on the sum of all items of this scale, the more they attribute academic success to an external locus of control (Anderson et al., 2018; Nowicki et al., 2018). Meaning that the lower the participant scores the more of an internal locus of control the participant has.

Achievement goals

The achievement goals were measured with the Achievement Goal Questionnaire – Revised (AQG-R). An example item is "My aim is to perform well relative to other students." The items were changed for this survey. Whenever an item asked about a specific class, the wording was changed to "classes", to make it more general. Furthermore, the 12 items were on a seven-point Likert-scale (see Appendix B). As for the reliability of the factors, mastery approach had sufficient reliability ($\alpha = .78$). An example item for this factor is "My goal is to learn as much as possible." Mastery avoidance also had sufficient reliability ($\alpha = .74$). An example item being "My aim is to avoid learning less than I possibly could." Moreover, the factors, performance approach ($\alpha = .94$) and performance avoidance ($\alpha = .91$) had excellent reliability. An example item for the performance approach factor is "My goal is to perform better than the other student." And an example item for the performance avoidance factor is "I am striving to avoid performing worse than others." The four goals were argued to be distinct constructs (Elliot & Murayama, 2008). According to multiple studies, the sum of the items per achievement goal reflect the students' endorsement of the achievement goal. Thus, a high score suggests a stronger endorsement of that specific achievement goal (Apostolou, 2013; Elliot & Murayama, 2008).

Presentation anxiety

Presentation anxiety was measured with the Public Speaking Anxiety Scale (PSAS). An example item is "giving a presentation is terrifying." In the questionnaire, the original word "speech" had been changed to "presentation". Furthermore, 17 items were on a five-point Likert-scale (see Appendix B). The reliability of this scale was found to be sufficient ($\alpha = .79$). Bartholomay and Houlihan, (2016) argued that the scale had good concurrent validity

($r = .84-.86$) and suggested a cut-off score of 64 for the presence of high levels of anxiety and a cut-off score of 73 for the presence of significant and impairing anxiety.

Data analysis

To analyze the data, the statistical program 'IBM SPSS Statistics 27' was used (Field, 2013). The variables had been standardized by computing z-scores, as the data had varying scales. Furthermore, a descriptive analysis was done to give an overview on the demographics and variables. Moreover, a reliability analysis was done to compute the Cronbach's alpha, which measures the internal consistency of the scales. The data was checked for normality, linearity and equity of variance. All statistical assumptions were met. A correlation analysis was conducted between all measured variables, including the achievement goals that were not scientifically supported to have a relationship with presentation anxiety, for exploratory purposes. Furthermore, to answer how a students' perceived locus of control and type of achievement goals affect their anxiety to present, a linear regression analysis was conducted to measure the relationship between the external locus of control and the anxiety to present, and a linear regression analysis was conducted with performance avoidance goals and the anxiety to present. In order to check whether there was a mediating effect, the results from the linear regression analysis with performance avoidance goals as IV and the anxiety to present as the DV were used. Furthermore, a multiple linear regression was computed with both the performance avoidance goals and the external locus of control as IV and presentation anxiety as DV. Finally, the Sobel test was conducted in order to check whether the effect of performance avoidance goals on presentation anxiety was significantly mediated by adding the external locus of control to the linear regression. The significance level was set to 5% ($p < .05$).

Results

Descriptive statistics

Table 1 shows the descriptive statistics of the items that were measured through the scales, and the demographics ‘age’ and ‘years studied’. Additionally, the output from the correlation analysis is displayed in table 2, which shows that presentation anxiety had a significant positive correlation with the external locus of control ($r = .27$) and mastery avoidance goals ($r = .23$). The correlations between presentation anxiety and the other three achievement goals were checked for exploratory purposes: mastery approach goal ($r = .06$), performance approach goal ($r = .02$) and performance avoidance goal ($r = .16$). However, no significant correlations were found, meaning that they did not have a significant effect on presentation anxiety.

Table 1

Descriptive Statistics

	min	max	mean	SD
Years studied	1	6	2.78	1.36
Age	17	31	21.47	2.10
Presentation anxiety	23	67	47.71	9.46
External locus of control	17	42	28.04	4.19
Mastery approach goals	4	21	16.05	3.15
Mastery avoidance goals	3	21	13.37	3.52
Performance approach goals	3	21	14.97	4.08
Performance avoidance goals	3	21	15.47	4.10

Table 2*Pearson's Correlations*

	1	2	3	4	5	6	7	8	9
1 Studying at University	1.00	0.03	0.01	-0.09	-0.08	-0.07	-0.03	0.10	0.01
2 Years studied	0.03	1.00	0.66*	-0.13	-0.17	-0.12	-0.08	-0.04	-0.18
3 Age	0.01	0.66*	1.00	-0.07	-0.16	-0.11	-0.08	-0.09	-0.14
4 Presentation anxiety	-0.09	-0.13	-0.07	1.00	0.27*	0.06	0.23*	0.02	0.16
5 External locus of control	-0.08	-0.17	-0.16	0.27*	1.00	0.02	0.11	-0.13	-0.02
6 Mastery approach goals	-0.07	-0.12	-0.11	0.06	0.02	1.00	0.39*	0.38*	0.32*
7 Mastery avoidance goals	-0.03	-0.08	-0.08	0.23*	0.11	0.39*	1.00	0.32*	0.40*
8 Performance approach goals	0.10	-0.04	-0.09	0.02	-0.13	0.38*	0.32*	1.00	0.56*
9 Performance avoidance goals	0.01	-0.18	-0.14	0.16	-0.02	0.32*	0.40*	0.56*	1.00

Note. * $p < 0.05$

Hypothesis 1

The regression analysis, with the external locus of control as IV and presentation anxiety as DV, computed the following, $R^2 = .06$, $F(1, 113) = 8.76$, $p = .004$. This suggested that 6% of the variance of the anxiety to present could be explained by an external locus of control. Furthermore, the external locus of control had a strong significant influence on the anxiety to present ($b = .60$; $p = .004$). Thus, the first hypothesis, which states that an external locus of control is related to a students' experienced presentation anxiety, is accepted.

Hypothesis 2

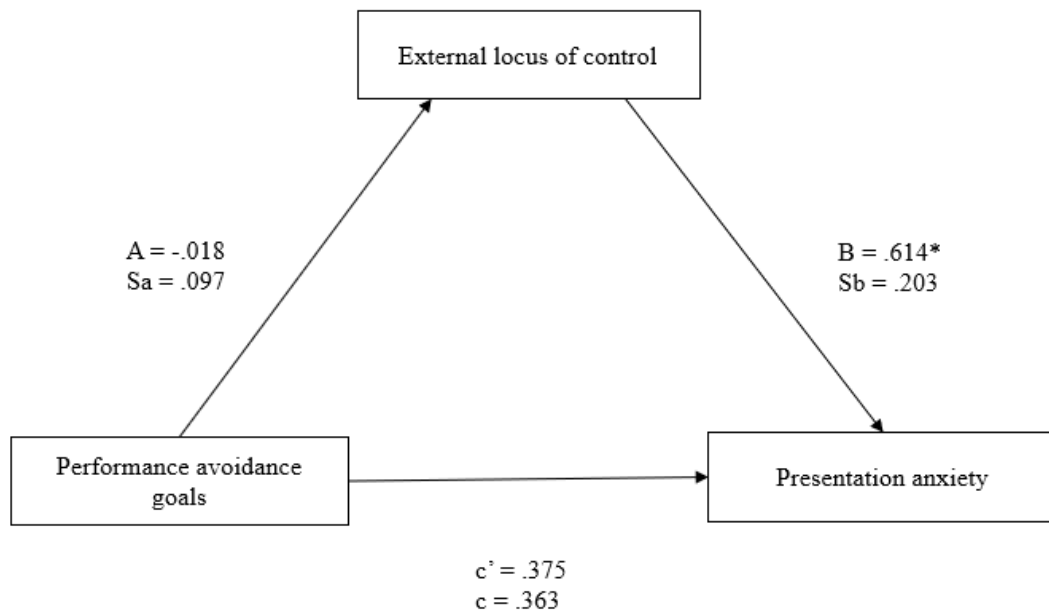
The regression analysis, with performance avoidance goals as IV and presentation anxiety as DV, computed the following, $R^2 = .016$, $F(1, 113) = 2.85$, $p = .094$. This suggested that 1.6% of the variance of the anxiety to present could be explained by having performance avoidance goals. Furthermore, the performance avoidance goals had an insignificant influence on the anxiety to present ($b = .36$; $p = .094$). Thus, the second hypothesis, which states that having performance avoidance goals is related to a students' experienced presentation anxiety, is rejected.

Hypothesis 3

The Sobel test was conducted to examine whether the external locus of control mediated the relationship between performance avoidance goals as IV and presentation anxiety as the DV. The mediation model is shown in Figure 1. The first results of the simple linear regression between performance avoidance goals and the external locus of control showed, $b = -.02$, $t = -.19$, $p = .850$. This result was insignificant. Next, when controlling for the mediator, a simple linear regression had been conducted between external locus of control and performance avoidance goals as IV's and presentation anxiety as DV. The following results were computed for the influence of external locus of control on presentation anxiety, $b = .61$, $t = 3.02$, $p = .003$. And finally, the Sobel test shows that there is no significant mediation ($z = -.19$; $p = .850$). There is no significant difference between the total effect of the IV on the DV and the direct effect of the IV and the DV ($c' = .375$; $c = .363$). Thus, the third hypothesis, stating that an external locus of control mediates the relationship between performance avoidance goals and presentation anxiety, is rejected.

Figure 1

Mediation analysis performance avoidance goals, external locus of control and presentation anxiety.



Note. A= raw (unstandardized) regression coefficient for the association between IV and mediator; Sa= standard error of A; B= raw coefficient for the association between the mediator and the DV (when the IV is also a predictor of the DV); Sb= standard error of B; c '= the total effect of the IV on the DV; c = the direct effect of the IV on the DV.

* $p < .05$

Discussion

The aim of this study was to look into the relation between having performance avoidance goals, an external locus of control and presentation anxiety. Although there was an overall lack of research on this topic, studies suggested that having an external locus of control and performance avoidance goals were factors that increase a students' anxiety to present (Hasibuan et al., 2021; Stewart et al., 2021). Cetinkalp, (2010) argued that performance avoidance goals were a determinant of external locus of control, which implied that an

external locus of control could mediate the relationship between performance avoidance goals and presentation anxiety. This study aims to prove or disprove these previous findings.

To answer how a students' perceived locus of control and type of achievement goals affect their presentation anxiety, the results of this study showed that there was a significant positive relation between the external locus of control and the anxiety to present. However, no significant relation had been found between performance avoidance goals and the anxiety to present. Furthermore, the external locus of control being a mediating variable between performance avoidance goals and the anxiety to present was not supported by this study.

The significant positive relation found in this study between the external locus of control and the anxiety to present was in line with the study by Hasibuan et al. (2022). The study by Hasibuan et al. (2022) was conducted in Indonesia and consisted of 60 participants from two different classes at the same university, while this study consisted of 114 students from different universities in the Netherlands and Germany. Thus, the study design was quite similar as both studies had small sample sizes and participants that are likely to be similar to each other to a certain extent.

Furthermore, no relation had been found between performance avoidance goals and the anxiety to present. This contradicts the findings from the study by Stewart et al. (2021). The study by Stewart et al. (2021) had a larger sample size of 1055 undergraduate students from different majors that were enrolled in the same language learning class in America. This relatively large difference in sample size might have been the reason for the contradiction in results. Moreover, the present study did not control for differences in study programmes which could also explain the difference in results.

Moreover, according to the findings of the present study, the external locus of control did not mediate the relationship between performance avoidance goals and the anxiety to present. This was contrary to the study from Cetinkalp, (2010), which had a sample size of

588 students from different universities in Turkey. For this study, the difference in results might have been caused by the difference of country and sample size. Furthermore, the study programmes could also have an effect, whereas both studies did not control for differences in study programmes.

Strengths and limitations

This study contained multiple strengths, with one of them being the choice of target group. Presentation anxiety is a very relevant topic for students, especially in the post-covid context, as they had to readjust to face-to-face presentations, which lead to increased anxiety (Hidayah et al., 2022). Another strength is the scarcity of literature on this topic, which makes this study a valuable addition that emphasizes the need for further research, as the study aims to prove or disprove previous findings.

However, the present study has low statistical power, which indicates that there was a low chance of detecting a true effect or that random and systematic error was likely skewing the results. For example, the majority of the participants were female, which could have had an influence on the results. A study did confirm that females are more likely to have an external locus of control than males (Awaworyi Churchill et al., 2020).

Moreover, although the participants did come from different universities in Germany and the Netherlands, the survey was distributed through convenience sampling. Thus, the participants might have been more similar to each other, which limits the ability to generalise. The possibility of under- or over-representation of the population could also be a limitation and convenience sampling could lead to biased results. The post-covid context in which this study was conducted should also be considered, as students were more prone to experience anxiety due to the lifting of COVID regulations (Hidayah et al., 2022). Furthermore, the data was collected through self-report measurements. Limitations of self-report measurements

could be response bias, giving socially acceptable answers and the introspective ability of the respondent (Lucas, 2018).

Future recommendations

As there was a lack of research on the effect of the locus of control and achievement goals on the anxiety to present, further research should be done. Rather than using self-report measurements, a recommendation would be to use an Implicit Association Test (IAT) to collect data based on the participants' assumptions (Galić et al., 2016). These assumptions could then be related to achievement goals and an internal or external locus of control. Since self-report measurements come with many limitations, it would be good to investigate the effect of different measures that are less dependent on introspective ability and giving socially acceptable answers (Lucas, 2018). A study showed that the IAT method of measurement is psychometrically sound and is especially appropriate when the measured construct could be subconscious (Galić et al., 2016). As both the locus of control and achievement goals had to do with cognition, it would be recommended to try an alternative form of measurement to explore whether there is a difference in results (Jansen et al. (2016).

Furthermore, research could be done on the influence that the post-covid context has on presentation anxiety, so interventions could be adapted to the possible effects that lifting COVID regulations have had on students' presentation anxiety. Mastery avoidance goals had a significant correlation with presentation anxiety, although performance avoidance goals was not significantly correlated, contrary to a previous study (Stewart et al., 2021). Thus, the influence of mastery avoidance goals on presentation anxiety could also be further explored in future studies.

Conclusion

The present study investigated the relationship between the external locus of control and performance avoidance goals on presentation anxiety, with the external locus of control as mediating variable. The assumption that the external locus of control influenced presentation anxiety was accepted. However, the assumptions that performance avoidance goals influenced presentation anxiety and that this relationship was mediated by the external locus of control were rejected. The limitations that led to these results were argued to be the homogenous sample size, which limited the ability to generalise. For future research, it would be recommended to explore the influence of mastery avoidance goals on presentation anxiety. Furthermore, since self-report have limitations, it would be recommended to replicate this study in an experimental setup.

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Appendices

Appendix A. Information Sheet and Informed Consent.

Project title and Investigators

You are being invited to participate in a research study titled “Presentation anxiety among students”. This study is being done by Jenny Diephaus, Thomas Lange, Renske van den Brink, Boutaina Chami from the Faculty of Behavioural, Management and Social Sciences at the University of Twente.

Purpose

This study investigates students' presentation anxiety, personality, coping, self-esteem, experience, self-efficacy, locus of control and achievement goals. The data will be used for the bachelor thesis of each researcher.

Procedure

When participating in our study, you will first ask to fill in your demographic information and then continue to answer some questions relating to presentation anxiety. Please answer as honest as possible. The study will take you approximately 15-20 minutes to complete.

Participant rights

Your participation in this study is entirely voluntary and you can withdraw at any time.

Risk and benefits

We believe there are no known risks associated with this research study; however, as with any online related activity the risk of a breach is always possible. To the best of our ability your answers in this study will remain confidential. We will minimize any risks by treating any responses anonymously, as it is not possible to trace back the answers to you. Therefore, your identity will stay hidden throughout the whole research process.

Consent and authorization

To continue with this study, you need to indicate that you understood and agree with the aforementioned information and give informed consent for participation. Clicking 'I agree and consent to participating in this study' implies that you have been informed sufficiently about the nature and method of this research and that you agree to participate in it

Study contact details for further information:

Student-researchers:

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If you accept the aforementioned terms, and wish to proceed to the survey, please click on "I agree and consent to participating in this study". Then click on the arrow to go to the next page.

Appendix B. Survey Items.

Please fill in the following information regarding: gender, student enrolment, type of education and its geographical location, year of studying, age, and nationality.

What do you identify as?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

Are you currently a student?

- Yes
- No

Are you currently studying at a University?

- Yes
- No, I study at another type of institution

Is the educational institution that you are studying at located in the Netherlands or Germany?

- Yes
- No, elsewhere

How many years have you been a student for as of now? (This is not limited to your current study, please fill in the total amount of years you have been enrolled in a higher educational study)

- Less than 1 year
- Between 1 and 2 years
- Between 2 and 3 years
- Between 3 and 4 years
- Between 4 and 5 years
- More than 5 years

How old are you?

What is your nationality?

- Dutch
- German
- Other, namely

In the first part of this survey you will see 17 statements about presenting. Select the answer that most accurately describes how you feel about the statements.

- Not at all
- Slightly
- Moderately
- Very
- Extremely

1. Giving a presentation is terrifying.
2. I am afraid that I will be at a loss for words while speaking.
3. I am nervous that I will embarrass myself in front of the audience.
4. If I make a mistake in my presentation, I am unable to re-focus.
5. I am worried that my audience will think I am a bad speaker.
6. I am focused on what I am saying during my presentation.
7. I am confident when I give a presentation.

8. I feel satisfied after giving a presentation.
9. My hands shake when I give a presentation.
10. I feel sick before speaking in front of a group.
11. I feel tense before giving a presentation.
12. I fidget before speaking.
13. My heart pounds when I give a presentation.
14. I sweat during my presentation.
15. My voice trembles when I give a presentation.
16. I feel relaxed while giving a presentation.
17. I do not have problems making eye contact with my audience.

The next section will have 15 questions about your locus of control (i.e. whether you attribute to internal or external factors). Select for each question to what extent you agree or disagree.

- strongly disagree
- disagree
- agree
- strongly agree

Q1. Do you feel that when someone doesn't like you there is little you can do about it?

Q2. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them?

Q3. Do you feel that when somebody your age wants to be your enemy there is little you can do to change matters?

Q4. Do you feel that when a person your age is angry at you, there is little you can do to stop him or her?

Q5. Did you feel that it was nearly impossible to change your parents mind about anything?

Q6. Most of the time do you find it hard to change a friends opinion?

Q7. Most of the time do you find it useless to try to get your way at home?

Q8. Do you feel that if things start out well in the morning, that it is going to be a good day no matter what you do?

Q9. Do you believe that wishing can make good things happen?

Q10. If you find a four leave clover, do you believe that it might bring you good luck?

Q11. Do you believe that most problems will solve themselves if you just don't fool with them?

Q12. Do you feel that one of the best ways to handle most problems is just to not think about them?

Q13. Do you feel that most of the time it does not pay to try hard because things never turn out right anyway?

Q14. Do you feel that most of the time parents listen to what their children have to say?

Q15. When you get punished does it usually seem its for no good reason at all?

The following section will have 12 statements about your achievement goals. Select for each statement to what extent you find it true or untrue of you.

- very untrue of me
- untrue of me
- somewhat untrue of me
- neutral
- somewhat true of me
- true of me
- very true of me

Q1. My aim is to completely master the material presented in my classes.

Q2. I am striving to understand the content of my courses as thoroughly as possible.

Q3. My goal is to learn as much as possible.

Q4. My aim is to avoid learning less than I possibly could.

Q5. I am striving to avoid an incomplete understanding of my course material.

Q6. My goal is to avoid learning less than it is possible to learn.

Q7. My aim is to perform well relative to other students.

Q8. I am striving to do well compared to other students.

Q9. My goal is to perform better than the other students.

Q10. My aim is to avoid doing worse than other students.

Q11. I am striving to avoid performing worse than others.

Q12. My goal is to avoid performing poorly compared to others.