

The impact of the corona pandemic on psychological distress in bereaved students



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Abstract

Governmental guidelines such as the closing of public amenities and restricting the amount of visitors at home due to COVID-19 have led higher education students to feel more lonely, lacking social support, and show increased levels of psychological distress. A specific subgroup of higher education students who might be particularly vulnerable to the consequences of the pandemic are bereaved students. COVID measures such as the inability to attend funeral services physically could hinder bereaved getting support needed for the process of their grief and increase psychological distress. The current study aimed to research possible factors that could influence psychological distress levels in bereaved students who lost somebody in the COVID-19 pandemic. The study aimed to research how the form of funeral attendance could influence psychological distress through meaningfulness attached to the funeral service. Further, it was hypothesised that loneliness could lead to higher levels of psychological distress in bereaved students and that this effect was moderated by the usage of avoidant coping styles. Through an online survey, students were asked to fill out several questionnaires. Results showed no significant main effect for loneliness on psychological distress and no moderating effect for avoidant coping between loneliness and psychological distress. While there was a significant effect of form of funeral attendance on meaningfulness and a significant effect of form of funeral attendance on psychological distress, meaningfulness did not mediate the relationship between form of funeral attendance and psychological distress. In the discussion implications and possible subjects for future studies are discussed.

Keywords: COVID-19, bereaved students, loneliness, coping, psychological distress, funeral services

The impact of the corona pandemic on psychological distress in bereaved students

When the Dutch government had issued a second lockdown to prevent further transmission of the omicron variant of the COVID-19 virus, multiple institutions including the Dutch association for Psychiatry (NVvP), the college counsel for MBO, and the national student union had stated their concerns in the national news that ongoing COVID-19 measures for schools could lead to severe mental health issues in Dutch society (NOS, 2022). Measures in the Netherlands such as the closing of universities prevented students to follow classes physically, the closing of public amenities, and the limit on visitors at home have forced students to limit social contacts with peers and friends. This limit on meeting others may prove to have detrimental effect on the development of students (NOS, 2022).

Distress in students

The COVID-19 pandemic is not the first report of lower mental wellbeing in students. Prior studies have already shown that university students often report higher levels of psychological distress compared to the general population and that this has been getting increasingly worse in the last decade leading to impaired academic performance and problematic health behaviours in students (Sharp & Theiler, 2018; Stallman, 2010). This indicates higher education students are an especially vulnerable group.

Symptoms of psychological distress in students possibly have increased due to the pandemic. Since the start of the pandemic university students in the Netherlands have reported feeling lonely, lacking social support, and having lower mental health overall (Trimbos Instituut, 2021). Trimbos Instituut additionally reported that of the 28000 students surveyed in the Netherlands from March to May 2021, 51% reported psychological complaints such as anxiety or a depressed mood, with 12% percent of those having a severely poor mental health. Students mentioned: a delay in studies, a high self-reported study debt or

future study debt, study related performance pressure, sleeping problems, lack of social support, and loneliness as possible causes for their psychological complaints (Trimbos Instituut, 2021). These reports are quite worrying as they highlight how common poor mental health is in the current student population during the COVID-19 pandemic. The consequences of previous COVID-19 measures are not only visible in the Netherlands, as medical students in the United States and Egypt have shown similar symptoms of higher psychological distress (Ghazawy et al., 2021; Meo et al., 2020). Current research on the effects of COVID-19 on students are still limited but paint a worrying picture, that attention should certainly be given to students' worsening mental health.

Bereaved students

A particularly vulnerable group to psychological distress which has not been focused on in recent literature related to the pandemic are bereaved students. Research by Balk and colleagues (2010) have estimated that between 22% to 30% of college students are within 12 months of being bereaved due to the death of a family member or close friend. The current pandemic may possibly have increased these numbers due to excess mortality reported in over 69 countries (Karlinsky & Kobak, 2021).

Meta-analyses have already shown that bereavement can lead to psychological distress by adverse health outcomes including depression, anxiety and complicated grief (Stroebe et al., 2007). The COVID pandemic has led to further challenges as bereaved people could not properly say goodbye to their loved ones in the way they might have wanted (Carr et al., 2020). As people were strongly advised by the government to maintain distance and keep the amount of visitors to a minimum, grieving alongside other bereaved was severely hindered (RIVM, 2022). Little research has been conducted on the psychological effects of losing somebody significant during COVID and which factors could contribute to psychological distress. While some preliminary studies (Ghazawy et al., 2021; Meo et al., 2020) have

researched pandemic related psychological distress in the student population, no research as of yet has explored the psychological effects of the pandemic in bereaved students and the current study aims to explore this further.

Effects of inability to attend funerals physically

One possible factor that may influence psychological distress in bereaved students is the possibility of saying goodbye to the deceased after they have passed. A major change caused by the pandemic was the inability of physically attending funeral services to mourn the deceased. Many funerals instead needed to be held through online means. As Carr and colleagues (2020) mention in their study, due to the pandemic bereaved people must go through their grief without the possibility of saying goodbye properly and are left without the support of loved ones at the funeral. While funeral services are regarded as helpful to cope with the loss of a loved one, it does not seem very clear how helpful attending funerals are for diminishing symptoms of grief (Mitima-Verloop et al., 2021). As Mitima-Verloop and colleagues (2021) explain, that while it may help for the initial grief reactions, it is not clear what the long-term benefits are for a bereaved person's mental wellbeing. Currently, research on the form of funeral attendance and its effect on psychological wellbeing of the bereaved is still lacking. Preliminary research from Burrell and Selman (2020) shows inconclusive results if funeral attendance has benefits to mental wellbeing. They conclude that the benefit of funerals depends on how meaningful the bereaved finds and shapes these rituals and not the way the service was held. However Burrell and Selman (2020) also mention that in the previous studies reviewed, the bereaved had the option to choose a form of funeral service whereas bereaved during the pandemic had not. Further, they mention that organising an online funeral requires: sensitivity, creativity and skill. Both Carr and colleagues (2020) and Burrell and Selman (2020) mention that in times of the pandemic, bereaved were not able to physically comfort each other during the funeral, touch the coffin to say goodbye and lack the

social support of fellow bereaved after the service. In the case of online funerals, creating a service that simulates the feelings of support and love from other bereaved through an online medium may prove to be difficult to achieve. This is crucial as Burrell and Selman (2020) explain that funeral related rituals like touching the coffin and feelings of social support help add meaning to a funeral service for the bereaved. Therefore not being able to attend a funeral physically could lead to the service being perceived as less meaningful. The lack of meaningfulness of the funeral could then affect the levels of psychological distress in bereaved students (Burrell & Selman, 2020).

Effect of loneliness and avoidant coping styles on psychological distress

Another possibly important factor is loneliness in bereaved students. Vedder and colleagues (2022) found that multiple studies show that loneliness was correlated with lower mental and physical health in bereaved individuals. Loneliness has also been found to correlate with higher psychological distress in UK university students (McIntyre et al., 2018). As previously mentioned a survey of 28000 Dutch students from March to May 2021 reported increases in loneliness, herein they found that 51% felt moderately lonely and 29% had strong feelings of loneliness (Trimbos instituut, 2021). The increase in loneliness caused by the pandemic might therefore make loneliness present itself as a risk factor for the development of psychological distress and hinder necessary grief work in bereaved students.

Additionally, a factor that might influence the relationship between loneliness and psychological distress is the use of an avoidant coping style. In the study of Schnider and colleagues (2007) it was found that avoidant emotion-focused coping was a significant predictor of both complicated grief and PTSD severity. Further, research from Cousins and colleagues (2017) noted that avoidant emotion-focused coping is associated with worse outcomes on four domains of college adjustment (i.e., academic, social, personal or emotional, and institutional attachment) in both bereaved and non-bereaved students. Finally,

an earlier study also found associations between higher levels of loneliness and avoidant related emotion-focused coping (Deckx et al., 2018). This relationship could imply that coping styles may affect the relationship between loneliness and other factors as well. As no research has of yet been done on the effect of avoidant coping on the relationship between loneliness and psychological distress, it is therefore crucial to research whether bereaved students who felt lonely show greater levels of psychological distress and how the use of avoidant coping strategies could influence this effect, as this could help enhance interventions aimed for bereaved students during and after the pandemic.

The current study

The current research objective was to look for factors that can possibly influence psychological distress in bereaved higher education students during the COVID-19 pandemic. The current study focused on the following three research questions:

1. Is psychological distress higher in bereaved students who have lost somebody close during the corona pandemic than in non-bereaved students?
2. Is there an association between the form of funeral attendance and psychological distress mediated by meaningfulness of the funeral service in bereaved students who lost somebody during the pandemic?
3. Is there an association between loneliness and psychological distress moderated by the use of an avoidant coping style in bereaved students who lost somebody during the pandemic?

The following hypotheses were theorised. Based on previous literature it was hypothesised that students who have lost somebody during the pandemic are associated with higher levels of psychological distress compared to non-bereaved students (H1). Secondly, it was theorised that funeral attendance in bereaved students would correlate to psychological distress mediated through meaningfulness attached to the funeral practice. In this case it is

therefore hypothesised that not being able to attend a funeral physically could lead to the service being perceived as less meaningful. The lack of meaningfulness of the funeral could then affect the levels of psychological distress in bereaved students (H2). Lastly, it was hypothesised that there was an association between increased feelings of loneliness and higher psychological distress in bereaved students. This effect is moderated by a higher use of avoidant coping (H3).

The results of this study could help find causes for increased psychological distress in bereaved students who have lost someone in the COVID-19 pandemic and perhaps help target specific interventions or create preventive measures to help these students with possible disturbances in both their academic and private life. While this study was researched in the context of the COVID-19 pandemic, it could also be applied to potential future pandemics and address consequences caused by a pandemic and subsequent guidelines and safety measures or to other contexts that resemble the pandemic.

Methods

Design

In the current study, research was done by a cross-sectional design on the influence of form of funeral attendance, loneliness, and avoidant coping related factors on psychological distress in higher education students from multiple nationalities.

Procedure

This research study was approved by the Facultaire Ethische ToetsingsCommissie (FETC; 22-0586). Recruitment of participants was done by convenience sample on multiple channels. First, by distributing a survey link through social media sites such as: Whatsapp groups, Facebook and LinkedIn. Secondly, recruitment was done sharing the survey within personal social circles. Lastly, the survey was distributed via sona-sytems UU, a platform of Utrecht University, where bachelor students of social sciences can participate in studies in

exchange for participation hours (PPU's). The survey was conducted on the platform Qualtrics, a secured and private online platform where surveys can be made and distributed by the use of a web link.

After participants clicked on the link they were shown information letter including an informed consent letter. By reading the information letter exclusion criteria were mentioned and participants could decide if they were willing to participate in the current study.

Participants that did not agree to participate or did not complete the survey were excluded from the results. After agreeing, participants were asked to fill in multiple questionnaires including demographic variables and factors predicted to have an influence on psychological distress such as in the case of the current study: loneliness and usage of avoidant coping styles. Participants who mentioned that they have lost someone close to them during the COVID-19 pandemic were shown additional questionnaires concerning bereavement related factors such as: the form of funeral attendance and the meaningfulness experienced from it. Other questionnaires were administered for different studies but these were not used in the current study¹. The expected time to fill in the survey was estimated to last between 15-20 minutes.

Participants

In total 150 Participants filled out the survey of which 136 were included in the results. A total of 14 Participants were excluded from the current study, for not meeting inclusion criteria. Within the current sample 51 (37.5%) participants stated to have lost someone close to them during the pandemic of which only 44 (32.4%) fully completed all questionnaires. Exclusion criteria were checked such as: if participants did not give informed

¹ Other questionnaires used: Intolerance of Uncertainty (IOU), Prolonged Grief (PG-13), and several bereavement related questions concerning the final goodbye and questions relating to reminders, feelings of shock, and reduction of functions after bereavement.

consent, if the participants were no higher education students, under 18 years old, and if they did not fully complete relevant parts of the survey.

Of the included participants 87 (64%) were female and 48 male, one person mentioned having an unspecified gender. The average age was $M = 22.75$. Nationalities included were mainly Dutch (67.6%), Irish (14.7%), German (8.8%) and (8.9%) of other nationalities. Levels of education included were 3 participants (2.2%) studying at an associated degree level, 90 (66.2%) studying at an university bachelor's level, 41 (30.1%) at an university master's level, and 2 (1.5%) stated studying at other levels.

Measures

Social demographics

Participants provided answers to various social demographic variables such as: Age, gender, nationality, current level of education, if someone close to them died during the pandemic and the time since bereavement.

Revised UCLA-Loneliness

The revised UCLA-loneliness scale (version 2) was used to measure loneliness by filling out a 4-point Likert scale of 20 statements. Participants rated how descriptive a statement was for them. An example of a statement is "*My social relationships are superficial*". Items are scored from 1 (Never) to 4 (Often) (Russell et al., 1980). Items: 1, 4, 5, 6, 9, 10, 15, 16, 19, 20 were reverse coded. Scores can range from 0 to 60, by adding up the scores of each statement indicating higher loneliness. Russell and colleagues (1980) reported a high internal consistency with an Alpha of .94. Additionally, they reported that the revised loneliness scale passed a very stringent discriminant validity test and that the concurrent validity criteria were independent of other variables on loneliness. The revised UCLA loneliness scale in the current study reported a Cronbach's alpha of .90 which indicates that the questionnaire is very reliable.

Brief-COPE

The Brief-COPE consists of a sub dimension of 8 statements about the topic of avoidant coping. Participants were asked to state how much they have been tackling recent hardships by filling out a 4-point Likert scale (1 = *I haven't been doing this at all* to 4 = *I've been doing this a lot*) (Carver, 1997). An example question is: 'I've been giving up trying to deal with it'. Scores can range from 8 to 32 total. For the analyses sum scores were used. Carver (1997) mentions the reliability of all the subscales making up the avoidant coping sub-dimension, reporting an Alpha of .54 on Denial, an Alpha of .71 on Self-Distraction, an Alpha of .90 on substance use, and lastly an Alpha of .65 on Behavioural Disengagement. Additionally, Poulus and colleagues (2020) mention an internal consistency with an Alpha of .68 on the avoidant coping sub-dimension indicating that the sub-dimension is reliable. The avoidant coping sub-dimension in the current study reported a Cronbach's alpha of .80 which indicates that the questionnaire is reliable.

K10

The K10 consists of 10 questions about psychological distress in the past four weeks. Participants answered these questions using a 5-point Likert scale (1 = *None of the time* to 5 = *All of the time*). An example question is: 'About how often did you feel nervous?' (Kessler et al., 2002). Total scores will range from 10 to 50 and were used in the analysis. The total scores can give an indication of the level of psychological distress. In the study of Fassaert and colleagues (2009) a high internal consistency was found with an Alpha of .93 and good criterion validity. The current study reported a Cronbach's alpha of .87 indicating the questionnaire to be very reliable.

Bereavement related variables

Participants were asked several questions related to the funeral service of the deceased. The participant was asked if they attended a funeral service for the deceased and if yes, whether the service was held physically, online or there was not a funeral service held.

Participants then rated how meaningful they found the service on a 4-point Likert scale (1 = *Not meaningful at all* to 4 = *Very meaningful*).

Statistical analyses

Power analysis

Before data was collected a power analysis was performed to decrease the chance of mistakenly adopting the H0 (type 1 error) and mistakenly rejecting the H0 (type 2 error).

From performing the power analysis using the programme GPower 3.1 it was concluded that a sample size of at least 102 participants was necessary.

Data inspection

First, the dataset was inspected in SPSS statistics 28. Exclusion criteria were checked. Secondly, the dataset was checked for the following assumptions: Gaussian distribution, absence of outliers, homogeneity of variance, multicollinearity and reliability. For the Gaussian distribution, histograms were checked if the assumption was met. Outliers were searched for by the use of scatterplots and boxplots. Those were statistically substantiated by estimating the standardized residuals, the Mahalanobis distance, and the Cook's distance (Field, 2018). If these values met the prior established limits, there was an indication for an outlier. Data not theoretically possible, would be removed. Scatterplots were also used to check the assumption for homogeneity of variance. This was confirmed by using Levene's test as is described by Field (2018) ($p > .05$). Multicollinearity was checked by the VIF, where values should be situated between 1 and 10 and tolerance should not be lower than 0.2 (Field, 2018). Lastly, a reliability analysis was done to check the Cronbach's Alpha of the UCLA, K10, and Brief-COPE.

Analyses conducted

First, an independent sample t-test was performed in order to test hypothesis 1 that psychological distress was higher in the bereaved versus non-bereaved group. Here, the mean values were compared ($p < .05$).

By using the extension PROCESS version 3.5 in SPSS, hypotheses 2 and 3 were researched (Hayes, 2017). For hypothesis 2, correlations were checked according to Baron and Kenny (1986) and a mediation analysis was performed with funeral attendance as a predictor, meaningfulness as a mediator and lastly psychological distress as an outcome variable. Hypothesis 2 was checked for significance on the total effect, direct effect, and indirect effect.

For hypothesis 3 a moderation analysis was performed where avoidant coping moderated between loneliness and psychological distress. It was checked for significance on the main effects of loneliness and avoidant coping on psychological distress. Secondly, it was checked whether the interaction effect of avoidant coping on the relationship between loneliness and psychological distress was significant.

Results

First, all of the assumptions were checked. Assumptions were met for hypothesis 1 and 3. Hypothesis 2 violated the assumption of normal distribution in the meaningfulness variable, however according to Preacher and Hayes (2004) using bootstrapping estimates the properties of sample distribution from smaller data samples and makes the analysis robust to the violation of normality (Field, 2018). Therefore the mediation analysis was performed. No outliers were found. Table 1 below shows the descriptive statistics of all the questionnaires.

Table 1

Descriptive statistics of the psychological distress (K10), loneliness (UCLA), avoidant coping (BRIEF-Cope) and, meaningfulness variables for bereaved and non-bereaved students

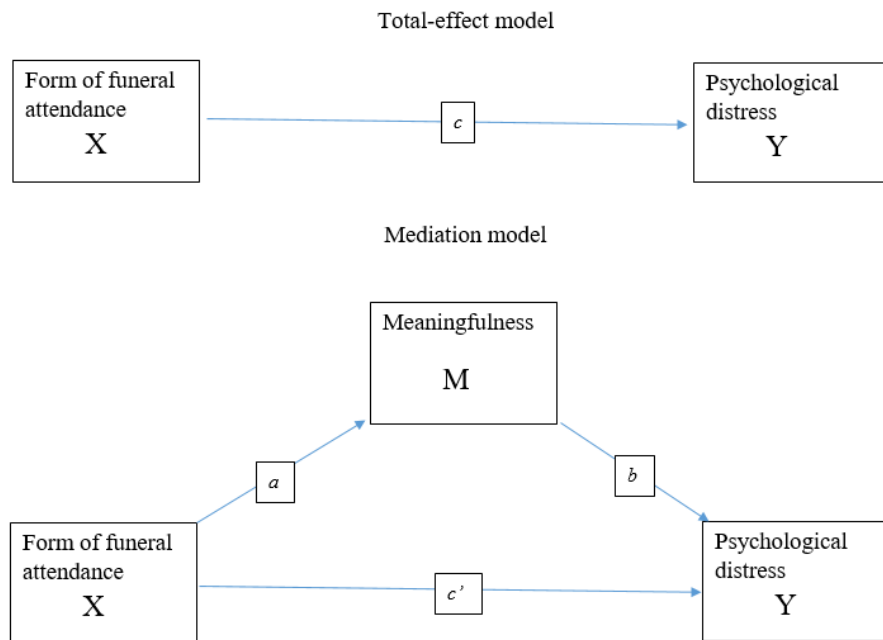
	<i>M</i>	<i>SD</i>	Min	Max	N
Psychological distress total for bereaved	22.76	6.77	10.00	38.00	45
Psychological distress total for non-bereaved	22.51	6.25	12.00	38.00	85
Loneliness total for bereaved	34.57	11.26	22.00	67.00	44
Loneliness total for non-bereaved	34.00	8.97	20.00	56.00	81
Avoidant coping total for bereaved	14.42	3.94	8.00	30.00	45
Avoidant coping total for non-bereaved	15.18	5.04	8.00	29.00	84
Physical funeral attendance meaningfulness	3.50	.76	1.00	4.00	38
Online funeral attendance meaningfulness	2.90	.99	1.00	4.00	10

For hypothesis 1 it was argued that bereaved students would show higher levels of psychological distress compared to non-bereaved students. An independent sample t-test was run. The results showed a mean difference of .25, (95% CI [-2.60, 2.10]) (See table 1) in bereaved students ($M = 22.76$, $SE = 1.01$) versus non-bereaved students ($M = 22.51$, $SE = .68$) which was not significant ($t = -.21$, $p = .42$). This meant that hypothesis 1 was rejected.

For hypothesis 2 it was hypothesised that meaningfulness mediated the association between funeral attendance and psychological distress. First correlations were checked before performing the mediation analysis. Significant correlations were found between form of attendance and meaningfulness ($r = -.35, p < .05$) and form of attendance and psychological distress ($r = .30, p < .05$). The correlation between meaningfulness and psychological distress was not significant ($r = -.20, p = .19$). Since previous literature by Burrell and Selman (2020) supported a possible relationship with meaningfulness and psychological distress, and Zhao and colleagues (2010) state the importance of conducting an analysis despite not fulfilling the conditions required according to Baron and Kenny (1986), a simple mediation analysis using PROCESS was performed, see Figure 1 for both the total effect model and mediation model. The total effect (path c) was significant ($b = 3.71, 95\% \text{ CI } [.09, 7.33], t(43) = 2.07, p < .05$). This implies that attending the funeral by online measures predicts more psychological distress. The analysis showed that path a was significant ($b = -.60, 95\% \text{ CI } [-1.03, -.17], t(43) = -2.80, p < .01$). This implies that attending a funeral through online measures predicts lower meaningfulness. Both effects in path b ($b = -.79, 95\% \text{ CI } [-3.40, 1.82], t(42) = -.61, p = .54$) and path c' ($b = 3.24, 95\% \text{ CI } [-.73, 7.21], t(42) = 1.65, p = .11$) were not significant. Path ab of form of funeral attendance through meaningfulness on psychological distress was not significant ($b = .47, 95\% \text{ CI } [-1.14, 2.04]$). Therefore, hypothesis 2 is rejected.

Figure 1

Graph of the total-effect model (path *c*) and mediation model (path *a*, *b*, and *c'*)



For hypothesis 3 it was argued that there was a positive association between loneliness and psychological distress that is moderated by the use of avoidant coping styles. The overall model showed a significant effect: $F(3, 40) = 7.78, p < .001, R^2 = .37$. The main effect between loneliness and psychological distress was not significant ($b = .65, 95\% \text{ CI} [-.16, 1.46], t(40) = 1.62, p = .11$). Additionally, the main effect of avoidant coping on psychological distress was not significant ($b = 1.73, 95\% \text{ CI} [-.30, 3.77], t(40) = 1.72, p = .09$). Lastly, the interaction effect was also not significant ($b = -.03, 95\% \text{ CI} [-.08, .02], t(40) = -1.12, p = .27$). This indicates that there was no moderation effect of avoidant coping between loneliness and psychological distress. The hypothesis is therefore rejected.

Discussion

The purpose of this research was to study the relationships between several factors influenced by COVID-19 and psychological distress in bereaved higher education students. The most important findings are discussed down below.

Firstly, this study researched a possible difference in psychological distress levels in bereaved versus non-bereaved students. No significant difference in mean scores was found, which was not in line with the hypothesis nor with previous literature where multiple studies have shown the influence of bereavement on the development of psychological distress (Stroebe et al., 2007). A possible explanation could be that the bereaved in this sample show signs of resilience. As Bonanno (2004) mentions in his study that resilience to loss is relatively common and could possibly prevent increases in psychological distress. The current sample of bereaved students may perhaps be resilient to the effects of loss. Nevertheless, more research would be needed to confirm this explanation.

Secondly, the relationship between form of funeral attendance, meaningfulness gained from the funeral service, and psychological distress was studied. Here, it was argued that meaningfulness would mediate this relationship. The mediation of meaningfulness was not significant. Noteworthy was a significant effect total effect of form of funeral attendance on psychological distress. Bereaved students who attended an online funeral reported higher psychological distress than students who attended a funeral physically. Further, the form of attendance predicted meaningfulness gained from the funeral service, indicating that attending a funeral online predicts lower meaningfulness. This is contradictory to the study of Burrell and Selman (2020) who argued that higher meaningfulness may help decrease psychological distress and not the form of attendance, although it should be noted that their current evidence was inconclusive. A possible explanation might be that meaningfulness may partly mediate the relationship between form of funeral attendance and psychological distress, but the

violation of the assumption of normality prevented a significant effect, as Koopman and colleagues (2015) mention in their study that mediation analyses with sample sizes smaller than 100 are hardly ever sufficient for significant effects even after bootstrapping. Future studies with a larger sample size could perhaps produce a significant mediation result.

Lastly, the moderating relationship of avoidant coping between loneliness and psychological distress was studied. No significant effect was found here either. This is not in line with the hypothesis that avoidant coping could strengthen the effect of loneliness on psychological distress. Nor has the current study shown that loneliness influences psychological distress as was expected from previous literature (McIntyre et al., 2018; Vedder et al., 2022). An alternative explanation may again be that the bereaved students from the current sample were more resilient to loneliness and used problem-focused coping. This is supported by Labrague and colleagues (2021) who found that resilience and problem-focused coping are protective factors against loneliness and therefore against psychological distress. Similarly, more research is needed to confirm this explanation.

Limitations

The current study had multiple limitations that should be taken into account. Firstly, a limitation of the cross-sectional nature of the study, made it so that results were only based on one point in time. This prevented to detect changes in the levels of loneliness, avoidant coping, meaningfulness, and psychological distress over time.

Secondly, multiple results may have shown an insignificant effect possibly due to a small sample size, particularly a small number of bereaved students. As the amount of bereaved who fully completed the survey was less than 51, the power in the current study might not have been sufficient due to not having a 1:1 ratio. This may also have been the case in the comparison of meaningfulness in both the physical as online attendance groups and explain why there was not a normal distribution. A higher sample size of bereaved students

may have provided significant results.

Thirdly, 64% of the current sample were female students. Prior literature has already shown that females often report higher levels of psychological distress than males, which may have influenced outcomes on average psychological distress scores (Zhang et al., 2018). The results from the current study should be taken into consideration when interpreting data as it may possibly be higher compared to the general student population.

Lastly, it should be important to point out that over two-thirds of the current sample were Dutch students, and over 90% of respondents in the current sample were from Western Europe. As COVID-19 measures and guidelines had differed majorly across countries, general caution should be heeded when interpreting these results.

Future studies

As the current study has shown, there are still uncertainties concerning the effect of funerals on psychological distress and which factors could affect this relationship. Future studies could focus on further researching the effect of meaningfulness gained from funerals in larger samples and how these may affect psychological distress levels over time after bereavement, wherein people who found high meaningfulness could be compared to people with low meaningfulness. Secondly, studies could compare physical and online funerals and their effects on psychological distress outside of COVID measures. This may provide valuable information that could help guide bereaved in their process of grief. Lastly, longitudinal studies could help to better understand how loneliness could influence psychological distress over time. The coping style of the bereaved may still prove to be an indicator of how the symptoms of the bereaved students' psychological distress may develop in relation to loneliness and could be addressed timely when psychological distress levels are increasing.

Implications

While all of the hypotheses were rejected, the results of this study may have some interesting implications. It was noteworthy that in the current sample 37.5% mentioned being bereaved. This was higher than previous literature estimated that students bereaved would be between 22% - 30% (Balk et al., 2010). This may possibly indicate that bereavement due to the consequences of the pandemic may be higher than normal, which can be quite worrisome considering previous literature showing how bereavement may effect psychological distress (Cousins et al., 2017; Stroebe et al., 2007). Further, this study found a significant relationship between physical funeral attendance and the meaningfulness gained from it. Additionally, it was found that online funeral attendance predicted more psychological distress. Therefore, the current study may provide reason to focus on the effects of meaningfulness and if online funeral services could be a viable option in future usage. Lastly, according to Zhao and colleagues (2010) the mediation analysis may possibly indicate an omitted mediator and thus give reason for further exploration of other factors influencing psychological distress in relation to form of funeral attendance. Literature on the use of online funeral services is still in its early stages and research on factors influencing bereaved students' psychological distress is still lacking. More research on online funerals can be used to find ways to improve their quality and help tackle psychological distress for current and future bereaved.

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