

**The Effect of Belief in Grief-Stages, Self-Blame, & Social Conformity
on the Grieving Process**

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Abstract

Since belief in Stages of Grief Models remain widespread despite increasing concern about their validity among mental health professionals, this paper investigates the hypothesis that it predicts increased complicated grief and whether self-blame and social conformity moderate this relationship. Linear regression was used to test the first hypothesis, that belief in grief-stages predict increased complicated grief reactions; two moderation analyses test the second, that social conformity moderates this, and third, that self-blame does likewise. Although results confirmed these trends, none achieved significance. This was largely attributed to convenience-based sampling methods not focusing on clinical groups, as it was suggested that nonclinical populations might believe grief-stages without harm. Thus, the convenience-based sampling method and use of scales unable to identify nuances of how belief might not be harmful may have been important limitations. Given important implications like a cognitive account of how belief in grief-stages maintains complicated grief in clinical populations and whether all such belief should be treated as traumatic, future research is merited into the role that population and other indicated factors play in the hypothetical effect of belief in grief stages upon complicated grief.

Keywords: stages of grief, complicated grief, social conformity, self-blame, exploratory questionnaire.

This paper will inspect how and if belief in stages of grief may complicate the grieving processes, as it suggests some griever rigidly fixate on conforming to grief-stage models in their thus maladaptively activated distal worldviews. This worldview is considered in terms of similarity with the more accepted Dual Process Model of Bereavement, which posits an ongoing oscillation between two processes: loss-oriented coping with grief-related thoughts & feelings and restoration-oriented process of relearning how to live without the deceased (Stroebe & Schut, 2010). Relevant moderators are identified and tested accordingly. In introduction, two grief-stage models are reviewed: Kübler-Ross Grief-Stages and Bowlby's Grief-Phases.

The five stages of grief – Denial, Anger, Bargaining, Depression, and Acceptance ('DABDA') – reached popularity when Kübler-Ross (1969) published *On Death and Dying*, drawing needed attention to emotional burdens of grief (Corr, 2021). Her 'Acceptance' stage became an American cultural icon for humanising end-of-life care (Klass, 1982), and Kübler-Ross & Kessler (2005) later broadened the use of DABDA, with Kessler (2019) even suggesting another stage, Meaning. Even now, 61.1% of websites on grief still cite DABDA (Avis et al, 2021), and 30-38% of public still consider it a scientifically valid representation of grief (Sawyer et al, 2022), even though it relies on mere impressions of clinical cases (Buglass, 2010). Regardless, few American and even fewer social work textbooks acknowledge this lack of proof, at most conceding that grief-stages may occur out of order or be skipped (Corr, 2020; Corr, 2022). That suffices for DABDA, so this paper now reviews Bowlby's Grief-Phases:

Based on Attachment Theory, Bowlby suggested treating mourning behaviours as attachment-styles ongoing from childhood, e.g., wailing to wake 'sleeping' (dead) caregivers. These are mutually reinforced in early caregiver-relations (e.g., parents waking in response), meaning that his model is psychodynamic, in that it emphasises childhood experiences, and

evolutionary, in emphasising evolved instincts. From observing the behaviours of distressed children parted from their mothers, Bowlby predicted four mourning-phases in 1973: numbness, yearning, searching, & anger (Earle, Komaromy, & Bartholomew, 2008). These overlap flexibly (Buglass, 2010), as per an adaptive loss/restoration-oriented coping-style developed with healthy early attachments (Stroebe, 2002).

Neither model escapes criticism: both for being developed from Western population data only (Buglass, 2010), a key point later; even Bowlby's model, to which critics concede better descriptive validity, is said to lack prescriptive usefulness (Stroebe et al, 2017). That is, even if Bowlby describes emotions accurately, helping clients disclose said feelings likely does not help (Stroebe et al, 2005). Thus, Wortman & Silver (1992) have argued that overarching learned helplessness from childhood, being key to complicated grief, is a more useful focus than such particulars of emotion – anticipating the modern focus on diagnostic mechanisms (Sauer-Zavala et al, 2017).

Before this, throughout the 1980s, Wortman and Silver were influentially criticising DABDA: ahead of their time again, they predicted that grieving was unpredictable and laid stress on the risky disparity between popularity of DABDA and meagre proof of its validity (Stroebe et al, 2017). Citing real-life cases where frustrated clinicians told clients to follow DABDA and 'die the right way' (Wortman & Silver, 1992), Silver & Wortman (2007) also speculated risks that not following DABDA may be mistaken for signs of illness, lessen support if deemed 'abnormal', thus cause guilt, etc. Some were later borne out (Friedman & James, 2008) and continue to be reiterated in most international psychology & nursing textbooks (Corr, 2021). Then why does belief in grief-stages persist?

Terror Management Theory (TMT) may have the answer, specifically with reference to what is called proximal & distal coping with anxiety about death. Proximal coping is an irrational bias that death will more likely take others than oneself; distal coping activates

(consciously or not) cultural worldviews – usually nationalist and/or religious beliefs in an afterlife, in the undying validity of one's culture, etc. – that enhance self-image before it can be projected to vanish in death, thus distracting from permanence/reality of death. Hence, distal worldviews recur the more accessible thoughts of death are, as expected in the bereaved, but even more when distracted from said thoughts (Greenberg et al, 2000; Pyszczynski et al, 1999).

According to TMT, human-culture tends to ignore individual helplessness before death: instead, caregivers focus on nurturing essential life-skills (Solomon et al, 1991) to reduce learned helplessness and even death-anxiety (Mikulincer et al, 2002). If grief-stage models also treat bereavement coping as another normal life-skill to help continue living, human culture is thus motivated to accept them. Furthermore, grief-stage models may imitate popular distal worldviews like religion/nationalism: DABDA resembles religious charismatic works (Klass & Hutch, 1986), even suggesting 'anger at God' as a stage (Kübler-Ross & Kessler, 2005); 'Acceptance' is a nationalist icon of humanising America, hence its milder criticism in American books.

This paper suggests belief in grief-stages can exacerbate complicated grief reactions in ways besides falsely normalising it, however. People may ruminate on abstract grief-stages, to avoid more personal experiences with grief, i.e., Rumination as Avoidance (Stroebe et al, 2007). In that case, although distal coping should function like restoration-oriented coping by refocusing attention from ruminating about the deceased (loss-oriented coping) to life without the deceased, it focuses more on abstract worldviews of a supposedly normal grieving process, instead of concretely relearning healthy life-functions and processing personal emotions (Pyszczynski et al, 1999; Stroebe & Schut, 2010). Indeed, distal coping presumes distance from grief-related feelings, thus compromising loss-oriented processing of

them as well. Thus, rigid distal coping is proposed to reinforce maladaptive restoration-oriented coping, at cost to loss-oriented coping, as per this example:

A widower who cannot cook avoids learning how (restoration-oriented coping), thus avoiding tacit admission that his wife is dead (loss-oriented coping), to ruminate on vague, unconscious cultural beliefs, e.g., “it was her role” and maybe on DABDA, i.e., “this is just my Bargaining stage”. Although distal coping often occurs while distracted from thinking of the death (Greenberg et al, 2000) as by activities like learning to cook, he may use irrelevant life-functions (maladaptive restoration-oriented coping) to distract himself from adaptive coping, i.e., ‘bargaining’ about unrelated topics like if he needs to attend Church without her next week. This avoidance of clear death-reminders in favour of farther-off and irrelevant cues could indicate intense fear that physical may overpower semantic cues as per trauma (Boelen & Van den Bout, 2010; Ehlers & Clark, 2000), implying traumatic death-anxiety.

This does not prove that belief in grief stages is harmful: some grieverers even find them accurate & comforting, but they are not definitive as believed by 30% of the populace (Sawyer et al, 2022); their belief is likely often too rigid and thus potentially harmful (Silver & Wortman, 2007). Furthermore, grief-stages are consulted to proscribe what should be felt and when (Wortman & Silver, 1992), activating a more impersonal, stage-conforming identity focused on stimuli distracting from and suppressing feelings that do not follow grief-stages – predisposing complicated grief (Gupta & Bonanno, 2011). Although these harms of belief in grief-stages are unverified in prior research, much in theory supports it; and this paper aims to explore the hypothesised association between such beliefs and complicated grief reactions anyway. This paper will now consider potential moderators, with reference to the framework laid out so far.

As per TMT, people may be reinforced to believe in grief-stages by refocusing on their sociocultural worth as ‘successful grieverers’, which reduces death-thought accessibility

(Greenberg et al, 2000) and thus likely their grief-related feelings too. This suppression may suggest self-blame, which is central to developing complicated grief (Stroebe et al, 2014), predicts poorer resilience to grief (Weinberg, 1994) and thus oft-comorbid depression (Duncan & Cacciatore, 2015; Guarnerio et al, 2012), and is common in mentally at-risk groups overall (Ormel et al, 2013). Such grievers are likely to ruminate, possibly on grief-stages, and to cope – as neurotic – via Acceptance (Carolan & Wright, 2017; Hassani et al, 2008). As the latter is also a popular Kübler-Ross stage, it may be motivated from anxiety to avoid perceived peer-victimisation for not grieving in ways deemed normal – which self-blame also predisposes (Leigh & Clark, 2018; Schacter & Juvonen, 2017; Simon, Feiring, & Cleland, 2016). Unfortunately, even Acceptance only temporarily buffers the worse effects of self-blame (Da Paz et al, 2018). Thus, self-blame could influence and strengthen the relationship between belief in grief-stages and complicated grief reactions.

These at-risk groups, e.g., neurotics, are also prone to social conformity (Mallinson & Hatemi, 2018), which often accompanies high self-blame anyway (Costanzo, 1970) and may encourage attempts to follow fictitiously normal grieving processes (Harris, 2010) – i.e., stages of grief. Such grievers may engage in neurotically conformist Acceptance of grief-stage models (Hassani et al, 2008), probably conscientiously so (Mallinson & Hatemi, 2018; Wijenayake et al, 2020). Still, the abidingly extrinsic motive to avoid peer-victimisation would buffer better mental health (Oarga, Stavrova, & Fetchenhauer, 2015), as shallow social connections, based on just avoiding victimisation, can ease sense of responsibility (Foa, Brugman, & Mancini, 2012) but not bereavement mental health – presumably including self-blame – without closer attachments (Strobe et al, 2005). In turn, the poor openness to new experiences of conformers (Sibley & Duckitt, 2009) may weaken restoration-oriented coping by discouraging new, necessary lifestyle-changes after loss, like spending more time

with other close attachments. Thus, social conformity is proposed to moderate and strengthen unhealthy associations between belief in grief-stages and complicated grief reactions.

Overall, three hypotheses test the above framework: H1) that greater belief in the grief-stage models will predict more complicated grief-responses; H2) that self-blame will likewise moderate and increase that relationship; and H3) that an individual tendency to cope via social conformity will moderate and strengthen this relationship.

Methods

Participants

Participants were required to be at least 18 years old, have lost a loved one in the past five years, and have some familiarity with at least one grief-stage model: DABDA (two versions, i.e., one having the sixth stage ‘Meaning’) and Bowlby’s Grief-Phases. Though *G*-power analysis showed fifty-five were needed for a power of 0.8 and an effect-size of 0.15, the exclusion-criterion for familiarity with one of the models was expected to cause high exclusion rates.

Ultimately, 63 suitable participants aged 20-69 years old were included from a pool of 143 respondents, with a mean age of 30.9 years old ($SD=12.6$ years). The gender-ratio was somewhat even, with 24 males (38.1%), 37 females (58.7%), and one person preferring not to say or answering ‘non-binary’ apiece (1.6% each). Over half (55.6%) were in the Netherlands at time of survey; the rest were mostly in Germany (19%), Singapore (9.5%), or other countries – 3.2% in Ireland and the United States each, and 1.6% from each of various, mostly Western (e.g., the UK, Australia, Belgium) excepting Turkey and Malaysia.

Furthermore, most had been born in the Netherlands (27%) or Germany (20.6%); a somewhat large portion had been born in Singapore (11.1%) or Ireland (7.9%); the rest were again largely native to Western countries like Canada, Spain, Romania, etc., with a few from the USSR, Turkey, India, or Ethiopia. In this study, the convenience-based sample may have

skewed to higher education-levels, reflecting non-representative errors: only 3.2% had only finished secondary school or alternate professional qualifications each; 1.6% had finished only primary school; but 25.4% had attended some college/university, and as much as 66.7% had completed a degree.

Procedure and Ethics

Before publication, the Faculty's Ethics Review Board (FERB) reviewed and approved the survey under application number 23-1099. Data collection began mid-April 2023 and ended a month later in mid-May, with incentives of 0.5 credits from the online SONA of Utrecht University and a chance to win twenty euros in an online raffle. To offset high exclusion rates, recruitment was further maximised via a convenience-based approach on social media (i.e., LinkedIn, Instagram, WhatsApp), the dissemination-website SurveyCircle, and the Utrecht University campus, in-person & with posters.

All participants were given links to the survey with warnings about the potentially distressing subject matter and demographic exclusion criteria, with an information letter and requirement to confirm informed consent at the start of the survey. During the survey, participants were first asked to fill in demographic information and specific questions on circumstances of the loss. Then, in this order, they completed scales gaging their complicated grief reactions, containing exclusion-criterion items about familiarity with grief-stage models, measuring belief in said scales, asking about personal experience with the models, and three measuring social comparison, social conformity, and self-blame. The whole survey required about 15-20 minutes, and on completion, participants were thanked and invited to leave their email-addresses, if they wanted to participate in the raffle.

Materials

Demographic Information scale

This included six questions: five asked about sex, age, education-level, and countries of residency and birth; the sixth item was a ‘yes/no’ exclusion-item asking participants if they had lost a loved one in the past five years. Those who answered ‘no’ were automatically excluded and sent to the end of the survey.

The Revised 13-item Prolonged Grief scale (PG-13-R)

The PG-13-R measures grief-intensity dimensionally and reactions of Prolonged Grief Disorder, with items written to map onto its DSM-5 profile, e.g., ‘do you feel alone or lonely without the deceased’ (Prigerson et al, 2021). Ten items are answered on a five-point scale ($1 = \text{‘not at all,’}$ $5 = \text{‘overwhelmingly’}$), so their summative score ranges 10 to 50, with higher scores indicating more severe complications. The rest (two ‘yes/no’ items asking if a loved one had been lost/significant impairments had resulted, and an open-ended asking how many months had passed since) were merged into preceding scales. PG-13-R was an ideal choice for its remarkable temporal stability ($r = .86$), excellent reliability ($\alpha = .91$), and excellent external validity, with high correlations to PTSD, MDD, etc. (Boelen, 2011; Prigerson et al, 2021). In this study, it showed good reliability ($\alpha = .88$).

3-item Familiarity with Stages of Grief scale

Each of the three items asked about familiarity with DABDA (with & without the sixth stage) and Bowlby’s Grief-Phases; respondents could answer ‘no, unfamiliar,’ ‘yes, somewhat unfamiliar,’ and ‘yes, very familiar’. Answering ‘no, unfamiliar’ to all three automatically ended the survey.

64-item Beliefs about Stages of Grief scale

Items gauge extent of the belief that grieving is staged (e.g., ‘stages of grief are universal’) and attitudes towards the models (e.g., ‘stage models make grieving predictable’) on a four-point Likert scale ($1 = \text{‘strongly disagree,’}$ $4 = \text{‘strongly agree’}$). After excluding an item and reverse-scoring the twenty-three negatively coded items, the summative score would

range 63 to 252, with higher scores indicating stronger belief. A team of grief-experts had developed this scale recently in response to the absence of measures for belief in stages of grief and as part of a larger research initiative (Spinas, 2022). In this study, it showed excellent reliability ($\alpha = .96$).

Mehrabian & Stefl's (1995) 10-item Conformity Scale

This scale measures conformity as emulating others, trend-following, relying on advice, and tendency to be persuaded. Items, e.g., 'I don't give in to others easily', were measured on a seven-point scale ($1 = \text{'not at all true of me, ' 7 = \text{'extremely true of me'}$), with four items – 2, 7, 9, and 11 – being reverse-scored, so that summative scores range 11 to 77, with higher scores indicating greater conformity. Item-total correlations have exceeded .40, showing very good discriminatory validity (Mehrabian & Stefl, 1995); its reliability was good in other studies ($\alpha = .80$) (Moynihan, Igou, & Van Tilburg, 2019). Likewise, it was good here ($\alpha = .83$). The scale was chosen for brevity & good psychometric qualities.

2-item Self-Blame subscale from Brief COPE

The scale gages tendency to blame oneself in response to stressors (Carver, 1997). Both items – asking how often 'I've been criticising myself' and 'I've been blaming myself for things that happened' over the past three months – were answered on a four-point Likert scale ($1 = \text{'I haven't been doing this at all, ' 4 = \text{'I've been doing this a lot'}$), so summative scores range from 2 to 8 – high scores showing high self-blame. Although its reliability was questionable and its discriminant validity nonsignificant in its first study ($\alpha = .69$) (Yusoff, Low, & Yip, 2010), this does not reflect its overall good psychometrics, i.e., excellent intraclass correlation ($r = .94$), significant internal validity, and acceptable or good reliability ($\alpha = .70$ or $.85$) (Hagan et al, 2017; van Gils et al, 2022). The scale was chosen for shortness and requiring no edits, unlike others. In this study, reliability remained acceptable ($\alpha = .78$).

Statistical Analyses

All variables were interval measures. Summative scores of the PG-13-R represented complicated grief responses, viz. the dependent variable; of Beliefs in Stages of Grief the independent variable; and of Conformity and Self-Blame scales a moderator each. All analyses used Statistical Packages for Social Sciences (SPSS), including visual outcomes, i.e., histograms, scatter-plots, and box-and-leaf, and other tests for assumptions of linear regression: co-linearity, normality, homoscedasticity, and outliers. H1 was tested via linear regression of IV & DV, controlling for age & gender as factors that significantly impact grief experiences (Birditt & Fingerman, 2003); H2 and H3 via two separate moderation analyses using Hayes (2017) PROCESS Macro 3.5 at 5,000 bootstrapping levels.

Results

The box-and-leaf plot showed two outliers, both excluded at onset for the final count of 63 participants, with a lack of observable patterns in both scatterplot and VIF/tolerance values (about 1 and exceeding 0.1 respectively) indicating no homoscedasticity or multicollinearity. However, despite excellent skewness and kurtosis values, the tests of normality and histogram showed significant difference from a normal distribution – although the high participant-count, moderately bell-shaped visual outcome, and satisfaction of most assumptions indicates that the data are still usable (Sainani, 2012).

As Table 1 shows, results of the linear regression between belief in stages of grief and complicated grief reactions ($B = .010$) were nonsignificant, $F(3,57) = .492$, $p = .69$, indicating failure to reject the null hypothesis; thus, H1 was not supported. Indeed, while Model 1 ($F(5,55) = .715$, $p = .49$) – with predictors of gender ($B = 1.496$) & age ($B = -.008$) only – accounted for 2.4% ($R^2 = .024$) of variance in complicated grief reactions, belief in stages of grief accounted for just 0.1% of the 2.5% ($R^2 = .025$) in variance Model 2 accounted for. Conversely, Model 3 – which included the moderators – accounted for 9.7% out of the total

12.3% ($R^2 = .123$) predicted variance in complicated grief reactions, although only social conformity showed a significant relationship to complicated grief.

Table 1

Results for Linear Regression of Age & Gender, Belief in Stages of Grief, and Social Conformity & Self-Blame on Complicated Grief Reactions in Three Models

Variable	R^2	ΔR^2	F	df	B	p
Model 1	.024	.024	.715	2,58		.49
Gender					1.496	.24
Age					-.008	.91
Model 2	.025	.001	.492	3,57		.69
Belief in stages of grief models					.010	.79
Model 3	.123	.097	1.54	5,55		.19
Self-blame					.038	.67
Social conformity					1.232	.03*

* $p < .05$

As Table 2 shows, when H2 and H3 about effects of self-blame and social conformity respectively were tested in two separate moderation analyses, the joint predictive power of belief in grief stages and moderators upon complicated grief was consistently nonsignificant. For H2, only 9% of variance in complicated grief was predicted when self-blame moderated ($F_{(3,57)} = 1.872, p > .05$); for H3, only 2.6% of variance was predicted when social conformity moderated ($F_{(3,57)} = 0.499, p > .05$). Results were also nonsignificant ($p < .05$) for H2 and H3 with respect to interactions of belief in grief stages with either moderator, whether it was with self-blame for H2 ($B = .018, t = .80, p = .43$) or with social conformity for H3 ($B = -.0006, t = -.14, p = .89$). Variance in grief reactions were also nonsignificant ($p > .05$) when any of these was treated as a main predictor: belief in grief stages ($B = .028$ or $-.14, t = .20$ or $-.43, p = .50$ or

.85), self-blame ($B=-.089$, $t= -.68$, $p= .67$), or social conformity ($B = .19$, $t= .30$, $p= .76$).

Overall, results failed to reject null hypotheses for H2 and H3, so neither was supported.

Table 2

Results for Moderation Analyses on Effects of Self-Blame and Social Conformity on the Relationship between Belief in Stages of Grief and Complicated Grief Reactions

Variable	R^2	ΔR^2	F	df	B	t	p
Model 1	.090	.010	1.872	3,57			.14
Self-blame					-.089	-.68	.67
Belief in grief stages					-1.4	-.43	.50
Self-blame x Belief in grief stages					.018	.80	.43
Model 2	.026	.00030	.4990	3,57			.68
Social conformity					.19	.30	.76
Belief in grief stages					.028	.20	.85
Social conformity x Belief in grief stages					-.00060	-.14	.89

* $p<.05$

While trends for both moderation analyses of H2 and H3 in Figures 1 and 2 thus reflect nonsignificant results only, an interesting feature merits a remark. While Figure 1 could be said to support H2 by showing that higher self-blame moderates an increased relationship between belief in grief stages and complicated grief reactions, this relationship becomes notably negative in the low self-blame group.

Figure 1

Simple Slopes for Moderation Effect of Self-Blame on the Relationship between Belief in Grief Stages and Complicated Grief Outcomes

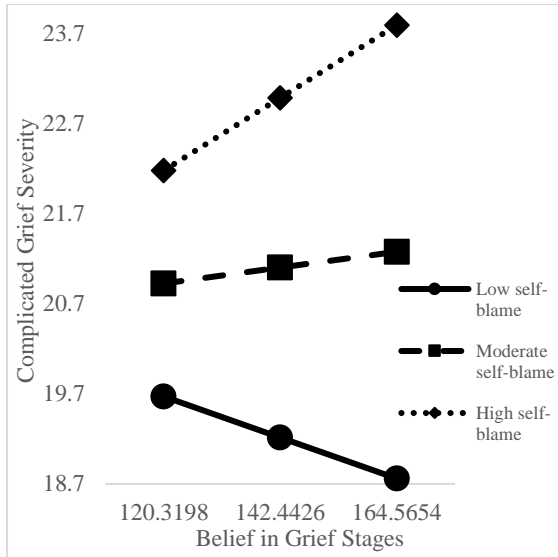
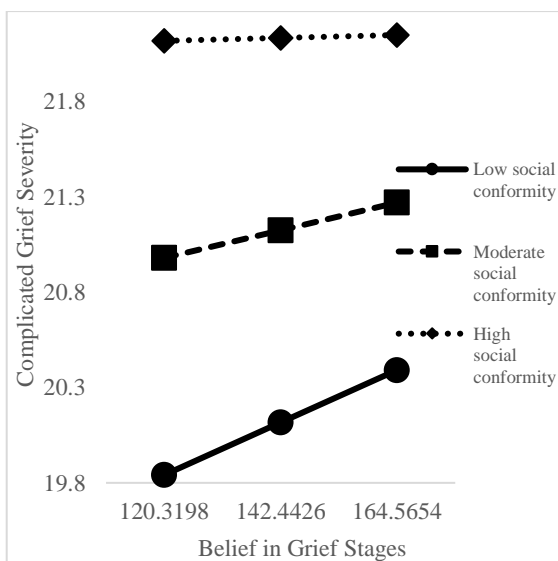


Figure 2 seems more straightforward: as H3 predicted, higher social conformity apparently moderates and strengthens the relationship between belief in stages of grief and complicated grief reactions – although this relationship seems to weaken, as per a levelled slope, in high social conformity groups. Thus, the trend in results of the second moderation analysis also supports H3 – but only non-significantly.

Figure 2

Simple Slopes for Moderation Effect of Social Conformity on the Relationship between Belief in Grief Stages and Complicated Grief Outcomes



Discussion

To our knowledge, this was among the first studies to investigate predictions that belief in stages of grief will impede the grieving process, and its findings did not support that hypothesised relationship in H1. Explaining why the regression test showed no significant increases in complicated grief due to belief in complicated grief is difficult, due to apparently conflicting with predictions or even experience of mental health professionals (Sawyer et al, 2022; Silver & Wortman, 2007). However, their accounts were based upon their patients, i.e., a clinical population, probably American like their clinicians (Silver et al, 1996); participants here were convenience-sampled, i.e., likely nonclinical, and mostly from Europe, where popularity of and thus perceived pressure to follow stages may be less. Indeed, it may be that nonclinical populations, with fewer mental health issues, are predisposed to experience less negative and more positive effects from belief in grief-stages, than those in need of therapy; and clinicians, only seeing the latter, may have skewed perceptions. The high education of most participants may also have reduced their credulity about grief-stages, though recent research suggests education is not protective (Dahmann & Schnitzlein, 2019).

It was also surprising that results of the moderation analysis for H2 showed the effects of self-blame upon complicated grief were nonsignificant, considering its documented centrality in grief (Stroebe et al, 2014). Perhaps the skewness to higher levels of complicated grief in this study, as per the histogram, impacted the sensitivity of analyses to changes in grief. But more difficult to explain – although the non-significance of this trend suggests that it probably does not reflect the overall population – is the inverted relation between belief in grief-stages and complicated grief reactions for low self-blame. While harder to explain the outright inversion of the trend so that higher belief predicts better grief outcomes, it may be suggested that belief in grief-stages is at least less harmful for such groups. After all, self-blame is arguably an intrapersonal process, predicting rigid cognitive styles that totally mediate openness to considering alternatives (Jugert, Cohrs, & Duckitt, 2009); so, those low

on self-blame are likelier to consider if stages of grief are true or not before accepting them, making their belief more flexible and thus less harmful.

It is also difficult, if less so, to explain results for the moderation analysis in H3: while trends do reflect social conformity moderating more complicated grief reactions at similar levels of belief in grief stages, thus supporting H3, the slope noticeably levels off for higher levels of conformity. That is, the relationship between belief and grief seems to weaken after a given maximum of social conformity. Again, this is all nonsignificant and may not reflect trends in the real population; but assuming they do, it may be that beyond a given limit of conformity, people may begin accepting beliefs without insight into what they believe, let alone why they believe it, perhaps rendering effects of their purported beliefs null and void. This aligns with supported links between social conformity and extrinsically motivated belief, i.e., purporting belief for reasons of status, wealth, etc., as opposed to intrinsic belief, i.e., the reasons for belief are in the belief itself (Darvyri et al, 2014; Rodriguez & Henderson, 2010), and with links of this extrinsic belief to weaker insight (Ghorbani & Watson, 2006).

This may explain why belief in grief-stages did not predict complicated grief, when testing H1: if participants had better insight into why they conformed to beliefs in grief-stages, they likely deemed their conformity legitimate, which can be protective against trauma (Carretta & Szymanski, 2020). As such low conformity groups likely had low self-blame too (Costanzo, 1970), this may also explain why those low on self-blame benefited from greater belief in grief-stages when H2 was tested. Though highly educated, participants likely were not experts in grief-stages but recognised experiencing feelings like Depression, Yearning, etc., and – if low on self-blame and attending mental health risks – focused on and identified more with positive stages like Acceptance (Kircanski et al, 2012). Their greater flexibility would also predispose accepting this via flexible heuristics, e.g., ‘it’s true enough for me’, without rigidly ruminating if they had progressed through the other, more negative

stages successfully. Similar processes may apply to the nonclinical, resilient population, whom mental health clinicians arguably overlook.

Limitations & Implications

This study had its strengths: the sample was diverse with a relatively even gender-ratio, and scales all showed internal reliability. Unfortunately, the scales used in cross-sectional methodology cannot reflect intricacies discussed above, i.e., insight into the heuristics of belief in grief-stages, and the lack of group-comparison prevents confirming speculated differences between clinical and nonclinical groups. Furthermore, our use of convenience-based methods makes non-representative errors likely, so it is uncertain that a nonclinical population was represented as suggested, limiting generalisability.

To see if H1, H2, and H3 are supported in clinical groups, future research could replicate methods here but with a group-comparison study of clinical and nonclinical (maybe also American and other national) populations. A qualitative study could also help to understand differences – if any – between the heuristics each group uses, and quantitative research could test if clinical groups or groups high on self-blame or social conformity tend more towards extrinsic belief in grief-stages. On one hand, if their results support our speculations, it implies that insisting belief in grief-stages is traumatic may foster a ‘trauma culture’ of anxious avoidant tendencies among nonclinical populations to consult psychologists on avoiding traumas and to rely less on personal experience (Rothe, 2011), it could also support a cognitive account of how extrinsic belief, conformity, and self-blame maintain complicated grief in clinical populations:

Grievors with extrinsically motivated beliefs are biased to predict more conformity to negative behaviours (Boppana & Rodriguez, 2017) but likely to pursue high social conformity to them anyway – as holding extrinsic beliefs predicts maladaptive behaviours (Rodriguez & Henderson, 2010). Intuitively, all this feeds into low willingness to believe in a

just world and high self-blame (Costanzo, 1970; Kim & Kim, 2017), promoting the processes maintaining complicated grief. First, poor insight into beliefs and behaviours may block integration into autobiographical knowledge. Second, grievors may hold negative global beliefs that the world is unjust and misinterpret grief reactions, i.e., their conformity, negatively; third, this supplements our suggestion that they ruminate whether they progressed rightly through grief-stages, as per Rumination as Avoidance (Boelen et al, 2006; Stroebe et al, 2007).

Conclusion

Overall, this paper was a merely preliminary study on speculated effects of belief in grief-stages upon complicated grief and how pathways of social conformity and self-blame may moderate this. Despite failing to support these hypothesised relationships, in the context of broader research it was an interesting foray into unexplored, possibly useful speculations. A cognitive account was suggested of how belief in grief stages may increase complicated grief reactions in clinical populations; it was also noted that nonclinical populations may believe grief-stage models from positive experiences, with positive mental health effects. Thus, practitioners who negatively view grief-stage models consult views perhaps limited to their clients and should maybe avoid treating all belief in grief-stages as traumatic. These implications derive from nonsignificant data; but given their potential uses, future replication of our methods, avoiding convenience-based sampling for group-comparison, is merited.

References

- Avis, K. A., Stroebe, M., & Schut, H. (2021). Stages of grief portrayed on the internet: A systematic analysis and critical appraisal. *Frontiers in psychology, 12*, 772696.
- Birditt, K. S., & Fingerman, K. L. (2003). Age and gender differences in adults' descriptions of emotional reactions to interpersonal problems. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 58*(4), P237-P245.
- Boelen, P. A. (2011). Personal goals and prolonged grief disorder symptoms. *Clinical Psychology & Psychotherapy, 18*(6), 439-444.
- Boelen, P. A., & Van den Bout, J. (2010). Anxious and depressive avoidance and symptoms of prolonged grief, depression, and post-traumatic stress disorder. *Psychologica Belgica, 50*(1-2), 49-67.
- Boelen, P. A., Van Den Hout, M. A., & Van Den Bout, J. (2006). A cognitive-behavioral conceptualization of complicated grief. *Clinical Psychology: Science and Practice, 13*(2), 109.
- Boppana, S., & Rodriguez, C. M. (2017). Mediators between parenting history and expected at-risk parenting: Role of conformity, coping, and attitudes. *Journal of Child and Family Studies, 26*, 3237-3245.
- Buglass, E. (2010). Grief and bereavement theories. *Nursing Standard, 24*(41).
- Carolan, M., & Wright, R. J. (2017). Miscarriage at advanced maternal age and the search for meaning. *Death studies, 41*(3), 144-153.
- Carretta, R. F., & Szymanski, D. M. (2020). Stranger harassment and PTSD symptoms: Roles of self-blame, shame, fear, feminine norms, and feminism. *Sex Roles, 82*(9-10), 525-540.
- Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the brief cope. *International journal of behavioral medicine, 4*(1), 92-100.

- Costanzo, P. R. (1970). Conformity development as a function of self-blame. *Journal of Personality and Social Psychology*, 14(4), 366.
- Corr, C. A. (2020). Elisabeth Kübler-Ross and the “five stages” model in a sampling of recent American textbooks. *OMEGA-Journal of Death and Dying*, 82(2), 294-322.
- Corr, C. A. (2021). Elisabeth Kübler-Ross and the “five stages” model in a sampling of recent textbooks published in 10 countries outside the United States. *OMEGA-journal of death and dying*, 83(1), 33-63.
- Corr, C. A. (2022). Elisabeth Kübler-Ross and the five stages model in selected social work textbooks. *Illness, Crisis & Loss*, 30(2), 320-332.
- Dahmann, S. C., & Schnitzlein, D. D. (2019). No evidence for a protective effect of education on mental health. *Social Science & Medicine*, 241, 112584.
- Da Paz, N. S., Siegel, B., Coccia, M. A., & Epel, E. S. (2018). Acceptance or despair? Maternal adjustment to having a child diagnosed with autism. *Journal of autism and developmental disorders*, 48, 1971-1981.
- Darvyri, P., Galanakis, M., Avgoustidis, A. G., Pateraki, N., Vasdekis, S., & Darviri, C. (2014). The revised intrinsic/extrinsic religious orientation scale in a sample of Attica’s inhabitants. *Psychology*, 5(13), 1557.
- Duncan, C., & Cacciatore, J. (2015). A systematic review of the peer-reviewed literature on self-blame, guilt, and shame. *OMEGA-Journal of Death and Dying*, 71(4), 312-342.
- Earle, S., Komaromy, C., & Bartholomew, C. (Eds.). (2008). *Death and dying: A reader*. SAGE Publications Ltd.
- Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour research and therapy*, 38(4), 319-345.

- Foa, C., Brugman, D., & Mancini, T. (2012). School moral atmosphere and normative orientation to explain aggressive and transgressive behaviours at secondary school. *Journal of Moral Education, 41*(1), 1-22.
- Friedman, R., & James, J. W. (2008). The myth of the stages of dying, death and grief. *Skeptic (Altadena, CA), 14*(2), 37-42.
- Ghorbani, N., & Watson, P. J. (2006). Religious orientation types in Iranian Muslims: Differences in alexithymia, emotional intelligence, self-consciousness, and psychological adjustment. *Review of Religious Research, 303-310*.
- Greenberg, J., Arndt, J., Simon, L., Pyszczynski, T., & Solomon, S. (2000). Proximal and distal defenses in response to reminders of one's mortality: Evidence of a temporal sequence. *personality and social psychology Bulletin, 26*(1), 91-99.
- Guarnerio, C., Prunas, A., Della Fontana, I., & Chiambretto, P. (2012). Prevalence and comorbidity of prolonged grief disorder in a sample of caregivers of patients in a vegetative state. *Psychiatric quarterly, 83*, 65-73.
- Gupta, S., & Bonanno, G. A. (2011). Complicated grief and deficits in emotional expressive flexibility. *Journal of abnormal psychology, 120*(3), 635.
- Hagan, T. L., Fishbein, J. N., Nipp, R. D., Jacobs, J. M., Traeger, L., Irwin, K. E., ... & Temel, J. S. (2017). Coping in patients with incurable lung and gastrointestinal cancers: a validation study of the brief COPE. *Journal of pain and symptom management, 53*(1), 131-138.
- Harris, D. (2010). Oppression of the bereaved: A critical analysis of grief in western society. *OMEGA-Journal of death and dying, 60*(3), 241-253.
- Hassani, J., Azadfallah, P., Tabatabaie, S. K. R., & Ashayeri, H. (2008). The assessment of cognitive emotion regulation strategies according to neuroticism and extraversion personality dimensions. *Advances in Cognitive Science*.

- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.
- Jugert, P., Cohrs, J. C., & Duckitt, J. (2009). Inter-and intrapersonal processes underlying authoritarianism: The role of social conformity and personal need for structure. *European Journal of Personality*, *23*(7), 607-621.
- Kessler, D. (2019). *Finding meaning: The sixth stage of grief*. Simon and Schuster.
- Kim, E., & Kim, J. (2017). Self-blame and blaming others mediate a belief in a just world and Hwa-Byung: A structural equation model. *International Journal for the Advancement of counselling*, *39*, 333-344.
- Kircanski, K., Joormann, J., & Gotlib, I. H. (2012). Cognitive aspects of depression. *Wiley Interdisciplinary Reviews: Cognitive Science*, *3*(3), 301-313.
- Klass, D. (1982). Elisabeth Kubler-Ross and the tradition of the private sphere: An analysis of symbols. *OMEGA-Journal of Death and Dying*, *12*(3), 241-267.
- Klass, D., & Hutch, R. A. (1986). Elisabeth Kubler-Ross as a religious leader. *OMEGA-Journal of Death and Dying*, *16*(2), 89-109.
- Kübler-Ross, E., & Kessler, D. (2005). *On grief and grieving: Finding the meaning of grief through the five stages of loss*. Simon and Schuster.
- Leigh, E., & Clark, D. M. (2018). Understanding social anxiety disorder in adolescents and improving treatment outcomes: Applying the cognitive model of Clark and Wells (1995). *Clinical child and family psychology review*, *21*(3), 388-414.
- Mallinson, D. J., & Hatemi, P. K. (2018). The effects of information and social conformity on opinion change. *PloS one*, *13*(5), e0196600.
- Mehrabian, A., & Stefl, C. A. (1995). Basic temperament components of loneliness, shyness, and conformity. *Social Behavior and Personality: an international journal*, *23*(3), 253-263.

- Mikulincer, M., Florian, V., Birnbaum, G., & Malishkevich, S. (2002). The death-anxiety buffering function of close relationships: Exploring the effects of separation reminders on death-thought accessibility. *Personality and Social Psychology Bulletin*, 28(3), 287-299.
- Moynihan, A. B., Igou, E. R., & Van Tilburg, W. A. (2019). Lost in the crowd: Conformity as escape following disbelief in free will. *European Journal of Social Psychology*, 49(3), 503-520.
- Oarga, C., Stavrova, O., & Fetchenhauer, D. (2015). When and why is helping others good for well-being? The role of belief in reciprocity and conformity to society's expectations. *European Journal of Social Psychology*, 45(2), 242-254.
- Ormel, J., Jeronimus, B. F., Kotov, R., Riese, H., Bos, E. H., Hankin, B., ... & Oldehinkel, A. J. (2013). Neuroticism and common mental disorders: Meaning and utility of a complex relationship. *Clinical psychology review*, 33(5), 686-697.
- Prigerson, H. G., Boelen, P. A., Xu, J., Smith, K. V., & Maciejewski, P. K. (2021). Validation of the new DSM-5-TR criteria for prolonged grief disorder and the PG-13-Revised (PG-13-R) scale. *World Psychiatry*, 20(1), 96-106.
- Pyszczynski, T., Greenberg, J., & Solomon, S. (1999). A dual-process model of defense against conscious and unconscious death-related thoughts: an extension of terror management theory. *Psychological review*, 106(4), 835.
- Rodriguez, C. M., & Henderson, R. C. (2010). Who spares the rod? Religious orientation, social conformity, and child abuse potential. *Child Abuse & Neglect*, 34(2), 84-94.
- Rothe, A. (2011). *Popular trauma culture: Selling the pain of others in the mass media*. Rutgers University Press.
- Sainani, K. L. (2012). Dealing with non-normal data. *Pm&r*, 4(12), 1001-1005.

- Sauer-Zavala, S., Gutner, C. A., Farchione, T. J., Boettcher, H. T., Bullis, J. R., & Barlow, D. H. (2017). Current definitions of “transdiagnostic” in treatment development: A search for consensus. *Behavior therapy, 48*(1), 128-138.
- Sawyer, J. S., Wilner, L. L., & Ertl, M. M. (2022). Grief and bereavement beliefs among US mental health professionals and the general public. *Death Studies, 46*(10), 2346-2353.
- Schacter, H. L., & Juvonen, J. (2017). Depressive symptoms, friend distress, and self-blame: Risk factors for adolescent peer victimization. *Journal of Applied Developmental Psychology, 51*, 35-43.
- Sibley, C. G., & Duckitt, J. (2009). Big-five personality, social worldviews, and ideological attitudes: Further tests of a dual process cognitive-motivational model. *The Journal of social psychology, 149*(5), 545-561.
- Silver, R. C., & Wortman, C. B. (2007). The stage theory of grief. *JAMA, 297*(24), 2692-2694.
- Simon, V. A., Feiring, C., & Cleland, C. M. (2016). Early stigmatization, PTSD, and perceived negative reactions of others predict subsequent strategies for processing child sexual abuse. *Psychology of violence, 6*(1), 112.
- Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A terror management theory of social behavior: The psychological functions of self-esteem and cultural worldviews. In *Advances in experimental social psychology* (Vol. 24, pp. 93-159). Academic Press.
- Spinas, B. (2022). *Belief in and Personal Experience with Stage Models of Grief amongst Bereaved Individuals* (Master's thesis).
- Stroebe, M. S. (2002). Paving the way: From early attachment theory to contemporary bereavement research. *Mortality, 7*(2), 127-138.

- Stroebe, M., Boelen, P. A., Van Den Hout, M., Stroebe, W., Salemink, E., & Van Den Bout, J. (2007). Ruminative coping as avoidance: A reinterpretation of its function in adjustment to bereavement. *European archives of psychiatry and clinical neuroscience*, 257, 462-472.
- Stroebe, M., & Schut, H. (2010). The dual process model of coping with bereavement: A decade on. *OMEGA-journal of Death and Dying*, 61(4), 273-289.
- Stroebe, M., Schut, H., & Boerner, K. (2017). Cautioning health-care professionals: Bereaved persons are misguided through the stages of grief. *OMEGA-Journal of death and dying*, 74(4), 455-473.
- Stroebe, W., Schut, H., & Stroebe, M. S. (2005). Grief work, disclosure and counseling: do they help the bereaved?. *Clinical psychology review*, 25(4), 395-414.
- Stroebe, M., Stroebe, W., Van De Schoot, R., Schut, H., Abakoumkin, G., & Li, J. (2014). Guilt in bereavement: The role of self-blame and regret in coping with loss. *PLoS One*, 9(5), e96606.
- Stroebe, W., Zech, E., Stroebe, M. S., & Abakoumkin, G. (2005). Does social support help in bereavement?. *Journal of social and Clinical Psychology*, 24(7), 1030-1050.
- van Gils, Y., Bleijenbergh, R., Brosens, C., Van den Branden, L., Rimaux, S., & Kuipers, Y. J. (2022). The validation of the brief COPE in a belgian perinatal population. *Maternal and Child Health Journal*, 26(10), 2050-2059.
- Weinberg, N. (1994). Self-blame, other blame, and desire for revenge: Factors in recovery from bereavement. *Death studies*, 18(6), 583-593.
- Wijenayake, S., van Berkel, N., Kostakos, V., & Goncalves, J. (2020). Impact of contextual and personal determinants on online social conformity. *Computers in Human Behavior*, 108, 106302.

Wortman, C. B., & Silver, R. C. (1992). Reconsidering assumptions about coping with loss:

An overview of current research. In L. Montada, S.-H. Filipp, & M. J. Lerner (Eds.), *Life crises and experiences of loss in adulthood* (pp. 341–365). Lawrence Erlbaum Associates, Inc.

Yusoff, N., Low, W. Y., & Yip, C. H. (2010). Reliability and validity of the Brief COPE

Scale (English version) among women with breast cancer undergoing treatment of adjuvant chemotherapy: a Malaysian study. *Medical Journal of Malaysia*, 65(1), 41-44.

Appendix

SPSS Output

Demographic Analyses

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
How old are you? - I am (please write number below):	63	20	69	30.87	12.559
Valid N (listwise)	63				

What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	24	38.1	38.1	38.1
	Female	37	58.7	58.7	96.8
	Non-binary	1	1.6	1.6	98.4
	Prefer not to say	1	1.6	1.6	100.0
	Total	63	100.0	100.0	

What is the country that you are currently residing in? - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The Netherlands	35	55.6	55.6	55.6
	Germany	12	19.0	19.0	74.6
	Singapore	6	9.5	9.5	84.1
	Other (please indicate)	10	15.9	15.9	100.0
	Total	63	100.0	100.0	

What is the country that you are currently residing in? - Other (please indicate) - Text

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	53	84.1	84.1	84.1
	Australia	1	1.6	1.6	85.7
	Belgium	1	1.6	1.6	87.3
	Ireland	2	3.2	3.2	90.5
	Malaysia	1	1.6	1.6	92.1
	New Zealand	1	1.6	1.6	93.7
	Turkey	1	1.6	1.6	95.2
	United Kingdom	1	1.6	1.6	96.8
	United States	1	1.6	1.6	98.4
	USA	1	1.6	1.6	100.0
	Total	63	100.0	100.0	

What is the country that you were born in? - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The Netherlands	17	27.0	27.0	27.0
	Germany	13	20.6	20.6	47.6
	Singapore	7	11.1	11.1	58.7
	Other (please indicate)	26	41.3	41.3	100.0
	Total	63	100.0	100.0	

**What is the country that you were born in? - Other
(please indicate) - Text**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	37	58.7	58.7	58.7
	Canada	1	1.6	1.6	60.3
	Ethiopia	1	1.6	1.6	61.9
	Great Britain	1	1.6	1.6	63.5
	greece	1	1.6	1.6	65.1
	Hungary	1	1.6	1.6	66.7
	India	2	3.2	3.2	69.8
	Ireland	5	7.9	7.9	77.8
	Latvia	1	1.6	1.6	79.4
	Malaysia	2	3.2	3.2	82.5
	Romania	1	1.6	1.6	84.1
	Spain	1	1.6	1.6	85.7
	Turkey	3	4.8	4.8	90.5
	United Kingdom	2	3.2	3.2	93.7
	United States	1	1.6	1.6	95.2
	USA	2	3.2	3.2	98.4
	USSR	1	1.6	1.6	100.0
	Total	63	100.0	100.0	

What is the highest level of education you have reached?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary school	1	1.6	1.6	1.6
	Secondary school (finished)	2	3.2	3.2	4.8
	Some college/university	16	25.4	25.4	30.2
	College diploma or university degree	42	66.7	66.7	96.8
	Other professional qualification	2	3.2	3.2	100.0
	Total	63	100.0	100.0	

Reliability Tests

Reliability Statistics

Cronbach's Alpha	N of Items
.875	10

Reliability Statistics

Cronbach's Alpha	N of Items
.958	63

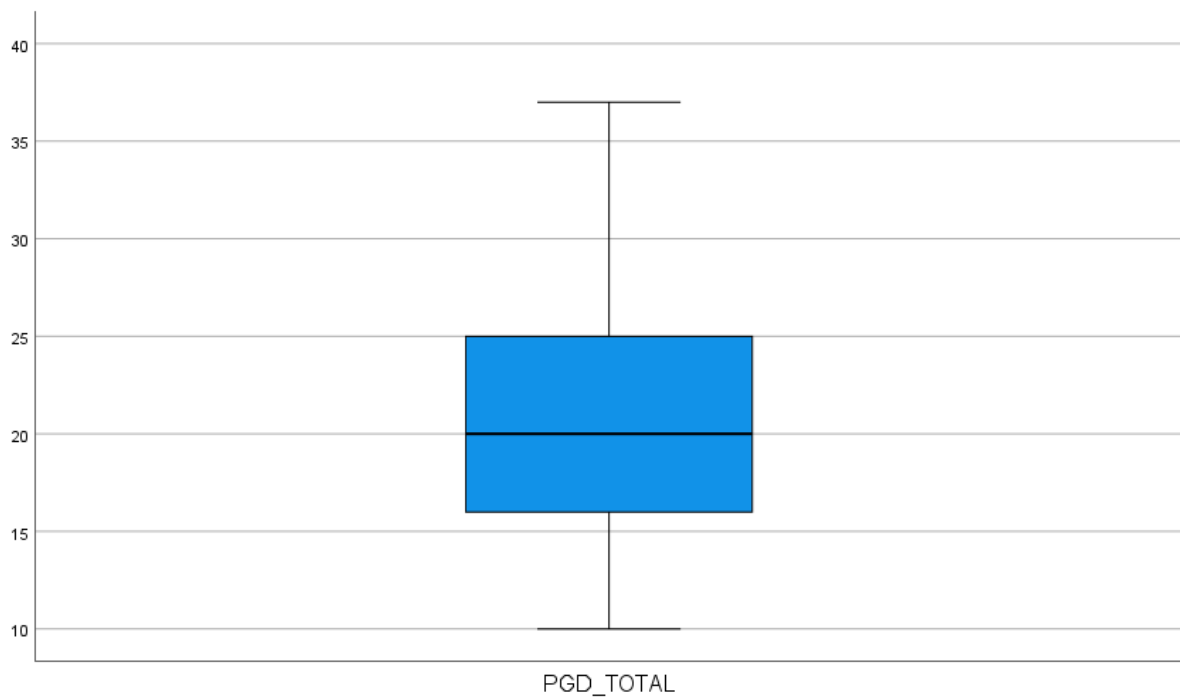
Reliability Statistics

Cronbach's Alpha	N of Items
.831	11

Reliability Statistics

Cronbach's Alpha	N of Items
.775	2

Assumption Tests



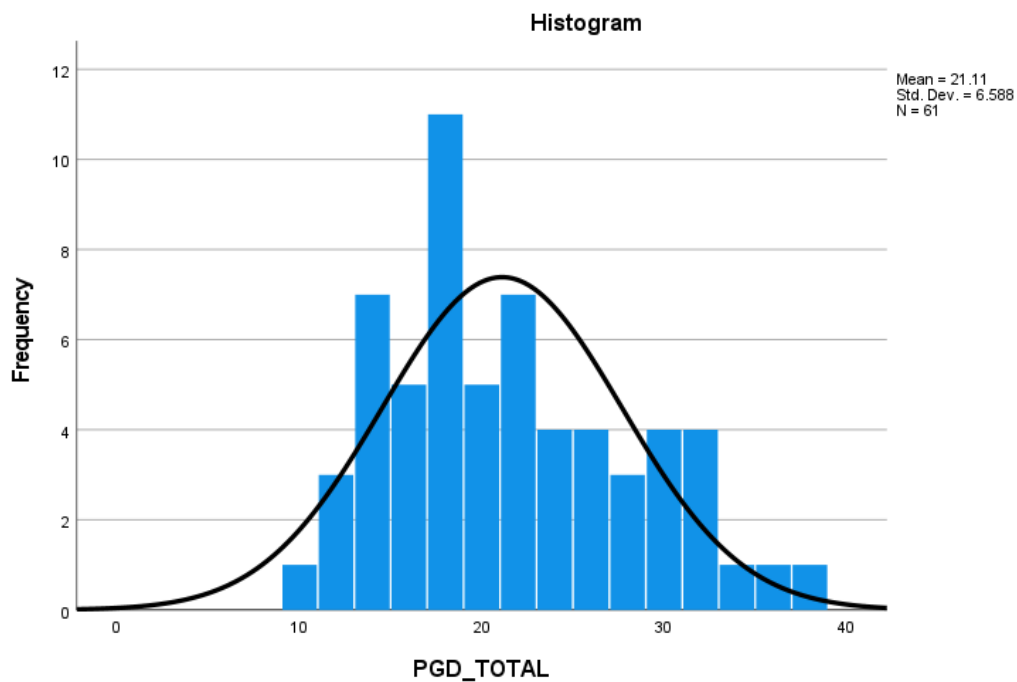
Descriptives

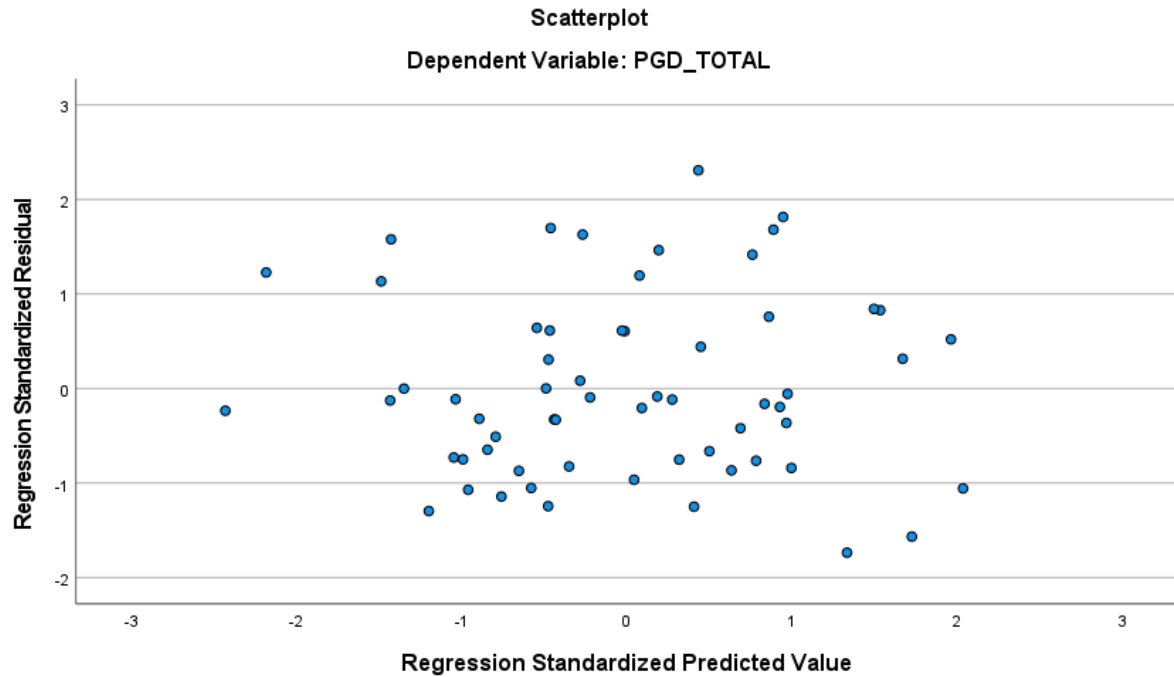
			Statistic	Std. Error
PGD_TOT	Mean		21.11	.844
AL	95% Confidence Interval for Mean	Lower Bound	19.43	
		Upper Bound	22.80	
	5% Trimmed Mean		20.87	
	Median		20.00	
	Variance		43.403	
	Std. Deviation		6.588	
	Minimum		10	
	Maximum		37	
	Range		27	
	Interquartile Range		10	
	Skewness		.512	.306
	Kurtosis		-.578	.604

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PGD_TOT	.124	61	.020	.957	61	.032
AL						

a. Lilliefors Significance Correction





		Coefficients ^a					Correlations			Collinearity Statistics	
		Unstandardized Coefficients		Standardized Coefficients			Zero-order	Partial	Part	Tolerance	VIF
Model		B	Std. Error	Beta	t	Sig.					
1	(Constant)	18.846	3.178		5.930	<.001					
	What is your gender?	1.496	1.266	.154	1.182	.242	.154	.153	.153	.996	1.004
	How old are you? - I am (please write number below):	-.008	.067	-.014	-.112	.912	-.024	-.015	-.014	.996	1.004
2	(Constant)	17.504	6.016		2.909	.005					
	What is your gender?	1.469	1.281	.151	1.147	.256	.154	.150	.150	.990	1.011
	How old are you? - I am (please write number below):	-.011	.069	-.021	-.157	.876	-.024	-.021	-.020	.963	1.038
	BELIEFS_TOTAL	.010	.040	.035	.264	.793	.042	.035	.034	.963	1.039
3	(Constant)	9.525	6.747		1.412	.164					

What is your gender?	1.873	1.266	.192	1.480	.145	.154	.196	.187	.945	1.058
How old are you? - I am (please write number below):	-.012	.067	-.023	-.179	.858	-.024	-.024	-.023	.959	1.042
BELIEFS_TOTAL	.006	.038	.022	.167	.868	.042	.023	.021	.956	1.046
S_CONFORM_TOTAL	.038	.089	.057	.426	.672	.156	.057	.054	.903	1.107
SELFBLAME_TOTAL	1.232	.556	.295	2.215	.031	.280	.286	.280	.897	1.115

a. Dependent Variable: PGD_TOTAL

Regression Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62.685	2	31.343	.715	.493 ^b
	Residual	2541.511	58	43.819		
	Total	2604.197	60			
2	Regression	65.780	3	21.927	.492	.689 ^c
	Residual	2538.417	57	44.534		
	Total	2604.197	60			
3	Regression	319.266	5	63.853	1.537	.194 ^d
	Residual	2284.931	55	41.544		
	Total	2604.197	60			

a. Dependent Variable: PGD_TOTAL

b. Predictors: (Constant), How old are you? - I am (please write number below): , What is your gender?

c. Predictors: (Constant), How old are you? - I am (please write number below): , What is your gender?, BELIEFS_TOTAL

d. Predictors: (Constant), How old are you? - I am (please write number below): , What is your gender?, BELIEFS_TOTAL, S_CONFORM_TOTAL, SELFBLAME_TOTAL

Model Summary^d

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.155 ^a	.024	-.010	6.620	.024	.715	2	58	.493

2	.159 ^b	.025	-.026	6.673	.001	.069	1	57	.793
3	.350 ^c	.123	.043	6.445	.097	3.051	2	55	.055

a. Predictors: (Constant), How old are you? - I am (please write number below): , What is your gender?

b. Predictors: (Constant), How old are you? - I am (please write number below): , What is your gender?, BELIEFS_TOTAL

c. Predictors: (Constant), How old are you? - I am (please write number below): , What is your gender?, BELIEFS_TOTAL, S_CONFORM_TOTAL, SELFBLAME_TOTAL

d. Dependent Variable: PGD_TOTAL

Moderation Analysis (Process Macro Model 3.5)

Social Conformity

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 3.5.3 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 1
Y : PGD_TOTA
X : BELIEFS_
W : S_CONFOR

Sample
Size: 61

OUTCOME VARIABLE:
PGD_TOTA

Model Summary	R	R-sq	MSE	F	df1	df2
p	.1600	.0256	44.5185	.4990	3.0000	57.0000
	.6845					

Model	coeff	se	t	p	LLCI	ULCI
constant	13.6230	19.9765	.6820	.4980	-26.3794	53.6254
BELIEFS_	.0275	.1403	.1957	.8455	-.2535	.3084
S_CONFOR	.1869	.6157	.3036	.7625	-1.0460	1.4198
Int_1	-.0006	.0043	-.1382	.8906	-.0092	.0080

Product terms key:
Int_1 : BELIEFS_ x S_CONFOR

Test(s) of highest order unconditional interaction(s):	R2-chng	F	df1	df2	p
X*W	.0003	.0191	1.0000	57.0000	.8906

Focal predict: BELIEFS_ (X)
Mod var: S_CONFOR (W)

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

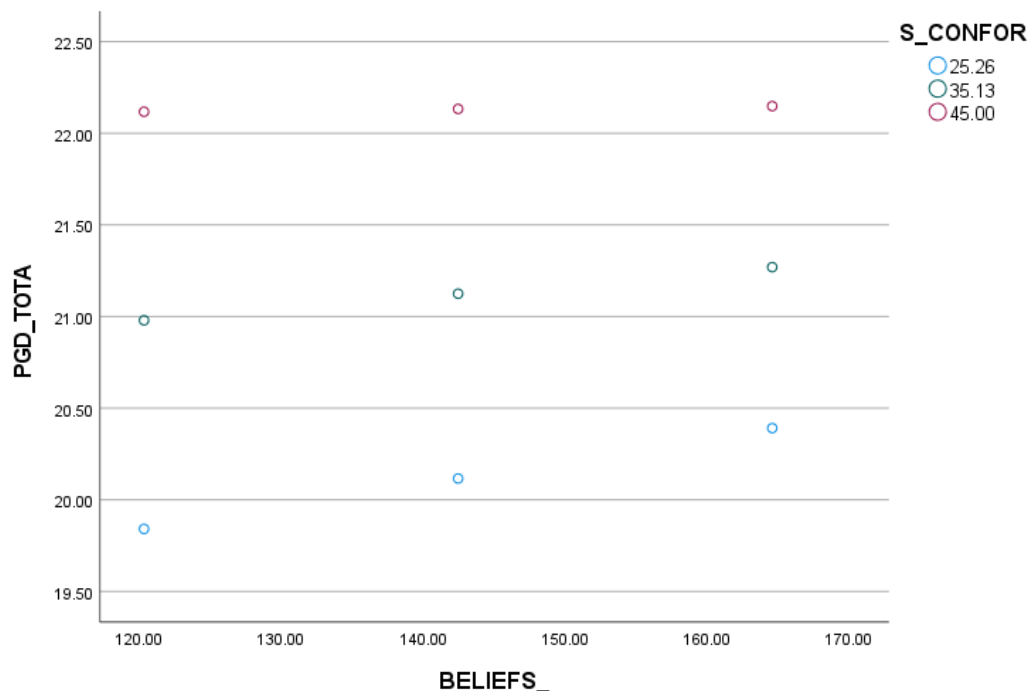
```
DATA LIST FREE/
  BELIEFS_   S_CONFOR   PGD_TOTA   .
BEGIN DATA.
  120.3198   25.2646    19.8415
  142.4426   25.2646    20.1165
  164.5654   25.2646    20.3915
  120.3198   35.1311    20.9797
  142.4426   35.1311    21.1249
  164.5654   35.1311    21.2700
  120.3198   44.9977    22.1179
  142.4426   44.9977    22.1332
  164.5654   44.9977    22.1485
END DATA.
GRAPH/SCATTERPLOT=
  BELIEFS_ WITH      PGD_TOTA BY      S_CONFOR .
```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

WARNING: Variables names longer than eight characters can produce incorrect output when some variables in the data file have the same first eight characters. Shorter variable names are recommended. By using this output, you are accepting all risk and consequences of interpreting or reporting results that may be incorrect.

----- END MATRIX -----



Self-Blame

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 3.5.3 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 1
Y : PGD_TOTA
X : BELIEFS_
W : SELFBLAM

Sample
Size: 61

OUTCOME VARIABLE:

PGD_TOTA

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.2995	.0897	41.5905	1.8718	3.0000	57.0000
	.1446					

Model

	coeff	se	t	p	LLCI	ULCI
constant	27.3476	18.4382	1.4832	.1435	-9.5745	64.2696
BELIEFS_	-.0886	.1294	-.6848	.4962	-.3478	.1706
SELFBLAM	-1.3810	3.2170	-.4293	.6693	-7.8229	5.0610
Int_1	.0181	.0226	.8014	.4262	-.0271	.0632

Product terms key:

Int_1 : BELIEFS_ x SELFBLAM

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0103	.6423	1.0000	57.0000	.4262

Focal predict: BELIEFS_ (X)
Mod var: SELFBLAM (W)

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/

BELIEFS_	SELFBLAM	PGD_TOTA	.
BEGIN DATA.			
120.3198	3.7643	19.6708	
142.4426	3.7643	19.2151	
164.5654	3.7643	18.7594	
120.3198	5.3443	20.9249	
142.4426	5.3443	21.1009	
164.5654	5.3443	21.2770	
120.3198	6.9242	22.1789	
142.4426	6.9242	22.9867	
164.5654	6.9242	23.7945	

```
END DATA.
GRAPH/SCATTERPLOT=
  BELIEFS_ WITH      PGD_TOTA BY      SELFBLAM .
```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

WARNING: Variables names longer than eight characters can produce incorrect output when some variables in the data file have the same first eight characters. Shorter variable names are recommended. By using this output, you are accepting all risk and consequences of interpreting or reporting results that may be incorrect.

----- END MATRIX -----

