Work package i

Putting the stress on conspiracy theories: Examining associations between psychological stress, anxiety, and belief in conspiracy theories

Swami et al., 2016

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Task: Read the abstract and summarize the main findings of the paper. Use additional material when available. Reflect what the findings imply with respect to potential interventions to misinformation and conspiracy theories.

Abstract

Psychological stress and anxiety may be antecedents of belief in conspiracy theories, but tests of this hypothesis are piecemeal. Here, we examined the relationships between stress, anxiety, and belief in conspiracy theories in a sample of 420 U.S. adults. Participants completed measures of belief in conspiracy theories, perceived stress, stressful life events, trait and state anxiety, episodic tension, and demographic information. Regression analysis indicated that more stressful life events and greater perceived stress predicted belief in conspiracy theories once effects of social status and age were accounted for (Adj. $R2 = .09$). State and trait anxiety and episodic tension were not significant predictors. These findings point to stress as a possible antecedent of belief in conspiracy theories.

Zusammenfassung

Psychologischer Stress und Ängste können eine Vorstufe des Glaubens an Verschwörungstheorien sein, doch sind die Untersuchungen zu dieser Hypothese nur bruchstückhaft. Wir haben die Beziehungen zwischen Stress, Angst und dem Glauben an Verschwörungstheorien in einer Stichprobe von 420 Erwachsenen in den USA untersucht. Die Teilnehmer füllten Fragebögen zum Glauben an Verschwörungstheorien, zum wahrgenommenen Stress, zu belastenden Lebensereignissen, zur Eigenschafts- und Zustandsangst, zur episodischen Anspannung und zu demografischen Informationen aus. Die Regressionsanalyse ergab, dass belastendere Lebensereignisse und größerer wahrgenommener Stress den Glauben an Verschwörungstheorien vorhersagten, nachdem die Auswirkungen des sozialen Status und des Alters berücksichtigt worden waren (Adj. $R2 = .09$). Zustands-

und Eigenschaftsangst sowie episodische Anspannung waren keine signifikanten Prädiktoren. Diese Ergebnisse deuten darauf hin, dass Stress eine mögliche Vorbedingung für den Glauben an Verschwörungstheorien darstellt.

Übersetzt mit www.DeepL.com/Translator (kostenlose Version)

References

Swami, V., Furnham, A., Smyth, N., Weis, L., Lay, A., & Clow, A. (2016). Putting the stress on conspiracy theories: Examining associations between psychological stress, anxiety, and belief in conspiracy theories. *Personality and Individual Differences*, *99*. https://doi.org/10.1016/j.paid.2016.04.084

items were reverse-coded prior to analyses and an overall score was computed as the mean of all items. Higher scores on this scale reflect greater trait anxiety. This form of the STAI has been shown to have good psychometric properties (Spielberger et al., 1983). Here, Cronbach's α for this scale was .84.

2.2.6. Episodic tension

To measure episodic tension, we used the Tension–Anxiety subscale of the Short Form of the Profile of Mood States (POMS-SF; Shacham, 1983). This subscale consists of 6 adjectives (sample item: "Tense"), which participants are asked to rate for the degree to which each adjective described themselves during the past week. As such, it provides a measure of transient or episodic tension. All items were rated on a 5-point scale, ranging from 1 (*Not at all*) to 5 (*Extremely*). A subscale score was computed as the mean of all 6 items, with higher scores reflective of greater tension and anxiety. The POM-SF, including its subscales, has good psychometric properties (Baker, Denniston, Zabora, Polland, & Dudley, 2002). Here, Cronbach's α for the Tension–Anxiety subscale was .89.

2.2.7. Socioeconomic status

We used the MacArthur Ladder of Subjective Social Status (MLSSS; Adler, Epel, Castellazzo, & Ickovics, 2000) to measure respondents' subjective social status. Participants were presented with a "social ladder" and asked to indicate the rung they felt best represented their socioeconomic status. Adler et al. (2000) reported that responses on the MLSSS are strongly correlated with traditional measures of socioeconomic status.

2.2.8. Demographics

Participants were asked to provide their demographic details, consisting of sex, age, ethnicity, and educational qualifications.

3. Results

3.1. Preliminary analyses

An independent-samples *t*-test showed that women ($M = 2.88$, $SD = 1.41$) and men ($M = 2.62$, $SD = 1.35$) did not significantly differ in the belief in conspiracy theories, $t(418) = 1.93$, $p = .054$, $d = 0.17$. Analyses of variance showed that there were significant differences in belief in conspiracy theories between ethnic groups, $F(3, 416) = 5.40$, $p = .001$, $\eta_p^2 = .02$, and between educational groups, $F(4, 416) = 2.87$, $p = .015$, $\eta_p^2 = .02$. Younger participants were more likely to believe in conspiracy theories, $r = -.15$, $p = .002$, but there was no significant correlation between belief in conspiracy theories and subjective social status, $r = -.06$, $p = .247$. Although these analyses suggest some demographic differences in belief in conspiracy theories, effect sizes were negligible-to-small. For this reason, we pooled the data for all subsequent analyses, but controlled for age and subjective social status.

3.2. Regression analysis

Partial correlations (controlling for social status and age) between belief in conspiracy theories and our measures of stress and anxiety are reported in Table 1. As seen, stronger belief in conspiracy theories was significantly associated with more stressful life events in the last 6 months, greater perceived stress in the last month, and higher trait anxiety. Effect sizes were small-to-moderate (rs = .10–.29). We next conducted a hierarchical linear regression with subjective social status and age entered in a first step[1] and the stress and anxiety measures

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[1] We also repeated this analysis, including ethnicity and education in the first step of the regression with age and subjective social status. Neither of the former variables reached significance, either in the first or second steps of the regression. Stressful life events, age, and perceived stress remained the only significant predictors in the second step.

Table 1
Partial correlations between belief in conspiracy theories, stress, and anxiety, controlling for subjective social status and age.

	(1)	(2)	(3)	(4)	(5)	(6)
(1) Belief in conspiracy theories	–	.15*	.29**	.06	.10*	.07
(2) Perceived stress			.25**	.41**	.22**	.43**
(3) Stressful life events				.29**	.22**	.30**
(4) State anxiety					.44**	.74**
(5) Trait anxiety						.39**
(6) Episodic tension						–

Note. $N = 420$.
* $p < .05$.
** $p < .001$.

entered in a second step. The first step of the regression with subjective social status and age was significant, $F(2, 417) = 5.30$, $p = .005$, Adj. $R^2 = .02$, with only age emerging as a significant predictor, $B = -.02$, $SE = .01$, $ß = -.05$, $t = -0.96$, $p = .002$. The second step of the regression was also significant, $F(7, 412) = 7.88$, $p < .001$, Adj. $\Delta R^2 = .09$. Of the variables entered into the model, the only significant predictors were stressful life events, $B = .22$, $SE = .04$, $ß = .28$, $t = 5.61$, $p < .001$, age, $B = -.02$, $SE = .01$, $ß = -.13$, $t = -2.77$, $p = .006$, and perceived stress, $B = .26$, $SE = .12$, $ß = .12$, $t = 2.21$, $p = .028$. Multicollinearity was not a limiting factor in this analysis (all variance inflation factors <2.52).

4. Discussion

Here, we examined associations between stress, anxiety, and belief in conspiracy theories. Our findings suggested that two separate indices of psychological stress were positively associated with belief in conspiracy theories once the effects of subjective social status and respondent age had been accounted for. Conversely, indices of anxiety were not significantly associated with belief in conspiracy theories once all other effects had been taken into account. Broadly speaking, our findings are consistent with theoretical discussions of the role that conspiracy theories play, particularly in terms of providing rational narratives of the world (Nefes, 2015). Below, we provide a fuller account of stress as a possible antecedent of belief in conspiracy theories.

Major world events, particularly those that are traumatic and emotive, are known to increase levels of stress (e.g., Goenjian et al., 2000). In addition to being stressful, such events also increase feelings of uncertainty, confusion, and existential threat (van Prooijen & Jostmann, 2013). In such a climate, some individuals may engage in sense-making processes aimed at restoring individual agency and a belief that the world is orderly and predictable (van Prooijen & Acker, 2015). In this view, some individuals may seek out and assimilate the sorts of all-encompassing explanations for events that conspiracy theories provide. By simplifying and by linking a series of events in relation to its supposed causes and effects, conspiracy theories may offer seemingly coherent explanations for distressing phenomena.

Of course, this view suggests that stressful events give rise to sense-making processes that favour conspiracy theories, whereas our data suggest that intra-individual subjective experiences of stress and the experience of negative life events are related to belief in conspiracy theories. Nevertheless, there may be parallels between the two pathways. For example, an individual experiencing stressful life events may begin to engage in cognitive patterns (e.g., seeing patterns in unrelated stimuli, making dispositional inferences about others; Sullivan et al., 2010; Whitson & Galinsky, 2008) that promote conspiracist ideation. Thus, stressful intra-individual life events may sometimes lead to a tendency to adopt a conspiracist mind-set. Once this worldview has become entrenched, other conspiratorial ideas are more easily assimilated and reinforced (Wood, Douglas, & Sutton, 2012).

Alternatively, it is not stress that is driving our findings, but rather threats to a sense of control (van Prooijen & Acker, 2015). That is, in