Intolerance Of Uncertainty Predicts Coping, Depression, And Anxiety During The COVID-19 Pandemic

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Intolerance of Uncertainty

- **Intolerance of uncertainty** (IU): individual difference that captures the extent to which people desire predictability and knowledge of the future, try to reduce future uncertainty by seeking information, and struggle with functioning in uncertain situations (Carleton, Norton, & Asmundson, 2007).

- Often measured using the Intolerance of Uncertainty Scale (IUS Carleton et al., 2007).

  - "It frustrates me not having all the information I need."

  - "Uncertainty keeps me from living a full life."

IU and Internalizing Symptoms

- IU was significantly associated with symptoms of anxiety disorders (separation anxiety disorder, GAD, OCD, social anxiety) and of depression (Boelen, Reijntjes, & Carleton, 2014).

- Meta-analysis found (Gentes & Ruscio, 2011):
    - a mean correlation of .53 between IU and major depressive disorder symptoms;
    - a mean correlation of .57 between IU and dimensional measures of symptoms of GAD.

- IU predicted worry in response to situations that elicited low to medium level of uncertainty (Bruin, Rassin, & Muris, 2006).

IU, Coping Responses, and Depression & Anxiety

- A cross-sectional study in UK found that (Rettie & Daniels, 2020):
  - Higher IU predicted greater levels of depression, anxiety and health anxiety during COVID-19;
  - These associations were partially mediated by the maladaptive, but not adaptive coping subscale of the brief coping orientation to problems experienced (COPE; Carver, 1997);
  - A post hoc analysis of adaptive coping responses suggested that:
    - The adaptive strategies that are associated with help-seeking and preparation (i.e., emotional support, instrumental support and planning) were significantly positively correlated with IU;
    - Other adaptive strategies such as acceptance had a significant, negative correlation with IU.

The Current Study: Overview

- IU was found to be associated concurrently with maladaptive coping and depression/anxiety, but it is less clear whether IU predicts these outcomes over time.

- The COVID-19 pandemic has introduced a high level of uncertainty worldwide and therefore offers an opportunity for studying whether pre-pandemic intolerance of uncertainty predicts maladaptive coping and depression/anxiety several months later during the pandemic.

- **Objective**: This longitudinal study examined whether individual differences in IU measured pre-pandemic predicted different aspects of coping and depression/anxiety during the pandemic.

Participants and Procedure

- College student participants (N = 205; 81% female, 68% white) completed a trait measure of IU during a pretesting session in September 2019 or January 2020.

- Then in April/May 2020, participants completed questionnaires and narrative prompts assessing their coping and internalizing symptoms (depression and anxiety) during the pandemic.

- During the second assessment point, the campus was closed, and all students were dispersed and studying remotely.

Measures

- **Intolerance of Uncertainty.** The 12-item Intolerance of Uncertainty Scale-12 (IUS-12; Carleton et al., 2007) was used at two time points to measure pre-pandemic IU and mid-pandemic IU.

- **Depression and Anxiety.** The Hopkins Symptom Checklist-10 (HSCL; Derogatis et al., 1974) assessed the overall level of depression and anxiety.

- **COVID Worries.** Six items were used to measure overall worry about self, others, and the COVID-19 during the pandemic.
    - "I have been worried about my future because of the pandemic."

Measures (continued)

- **Coping strategies.** A 28-item COPE scale (Carver, 1997) measured the extent to which participants employ different strategies to cope with difficulties. Four composite scores were computed for coping strategies:

    - Problem Solving: active + planning

        - "I've been taking action to try to make the situation better."

    - Psychological Strategies: acceptance + positive reframing

        - "I've been looking for something good in what is happening."

    - Support Seeking: emotional support + instrumental support

        - "I've been getting comfort and understanding from someone."

    - Disengagement/avoidance: denial + self-blame + substance abuse + venting + behavioral disengagement + distraction (activity)

        - "I've been refusing to believe that it has happened."
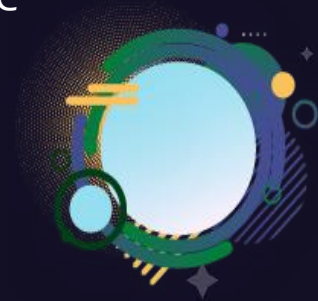
Results

Pre- to Mid-Pandemic IU

- IU showed moderate to strong rank-order stability over time;

- Mean levels of IU increased modestly from pre-pandemic (M = 2.67, SD = 0.70) to mid-pandemic (M = 2.87, SD = 0.89), t(204) = 3.58, p < .001.

IU, Worries, and Depression/Anxiety

- Higher pre-pandemic IU predicted higher levels of depression and anxiety (r = .23) as well as greater worries about the impact of the pandemic (r = .18) .

- Higher mid-pandemic IU predicted higher levels of depression and anxiety (r = .60) as well as greater worries about the impact of the pandemic (r = .40) .

IU and Coping Strategies

- Higher pre-pandemic IU predicted higher levels of disengagement coping strategies ($r = .18$) and support seeking ($r = .19$), but was not associated with the use of problem solving or psychological strategies.

- Higher mid-pandemic IU predicted higher levels of disengagement ($r = .48$) and support seeking ($r = .20$), less use of psychological strategies ($r = -.17$), and was not associated with the use of problem solving.

Discussion

- The mean level of IU increased modestly from pre- to mid-pandemic;

- Both pre-pandemic IU and mid-pandemic IU predicted higher levels of internalizing symptoms during the pandemic.

- The study replicate recent findings (Rettie & Daniels, 2020) that IU was concurrently associated with higher levels of maladaptive coping, reaching out more for social support, but less use of other adaptive coping such as psychological strategies.

Conclusions

- Overall, higher IU (assessed both before and mid-pandemic) was associated with lower levels of individual well-being, as seen by higher levels of avoidant coping strategies, higher levels of depression and anxiety, and higher levels of worry.

- Given the unprecedented level of uncertainty during the pandemic, research on intolerance of uncertainty is key to understanding the impact it may have on individuals in extreme situations. In addition, it may provide important insights on how to better plan for other times of high uncertainty, including wars, natural disasters, or other pandemics.

Thank you for Listening!

Correlations between pre- and mid-pandemic intolerance of uncertainty and coping strategies and depression/anxiety

Variable	I	II	III	IV	V
I. Pre-Pandemic IU	-	-	-	-	-
II. Mid-Pandemic IU	.49***	-	-	-	-
III. Problem Solving	.05	.03	-	-	-
IV. Psychological Strategies	-.08	-.17*	.45***	-	-
V. Support Seeking	.19**	.20**	.30***	.19**	-
VI. Disengagement	.18*	.48***	-.06	-.24***	.18**

Variable	I	II	VII
VII. HSCL Overall	.23**	.60***	-
VIII. COVID Worries	.18*	.40***	.62***

$p<.05*$, $p<.01**$, $p<.001***$