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Research Paper



Intolerance of Uncertainty, Self-Efficacy, Optimism & Emotions in Young Adults

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ABSTRACT

Uncertainty clouds almost every single step that we take throughout our life. The mere act of taking a decision promises uncertainty, no matter how aware or unaware we are of it. The recent Covid-19 pandemic has thrown light on the fickle nature of certainty and made us more aware that the unknown dictates our lives more than we thought it did. Due to these reasons, human beings are vastly intolerant to uncertainty and try to make their environment as certain as possible. Intolerance of Uncertainty (IU) has been a transdiagnostic feature in excessive worry as well as depressive disorders, Generalized Anxiety Disorder (GAD) and obsessivecompulsive behaviors. The aim is to study Intolerance of Uncertainty (IU), Self-Efficacy, Optimism & Emotions in young adults. The study was conducted on 90 young adults (58.9% females) from the age range 19 to 25. Standardized tools were used to measure intolerance of uncertainty, self-efficacy, optimism, and emotions. The results indicated that IU holds a significant relationship with life orientation and negative affect. Although no significant relationship was found between IU and self-efficacy and positive affect. Uncertainty is a pervading phenomenon that dictates our life from the background. It is suggested that individuals may, instead of denying the idea of uncertainty, make peace and accept this existential truth to live a better and more fulfilling life.

Keywords: Intolerance of Uncertainty, Self-efficacy, Life Orientation, Optimism, Emotions, Affect.

here can be no doubt when we say that uncertainty has a huge hold on each facet of our lives. Every single action and decision that we take, we do so in the realm of the unknown. It is a single common factor that although is a significant dictator in how we are going to live our next day, is conveniently ignored by our mind, due to the immense power it holds on to us, and the feeble power we hold on to it. Our brain is an anticipation machine, it takes data from the past and attempts to make as accurate inferences as it can for the future. It takes minimal data and connects the dots to attain the big picture. This method of functioning is efficient and reduces the burden of taking tedious decisions in every novel situation that an individual comes across (Ananthaswamy, 2015). This method is also prone to oversimplification of complex scenarios to facilitate quick decision-making at the expense of objectivity. Uncertainty regarding threats of future outcomes results in our inability to

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mitigate those threats and thus results in anxiety (Grupe et al., 2013). Some amount of uncertainty, therefore, must be disregarded to ensure smooth functioning of our cognition. Our mind ignores a lot of uncertain hypotheses which brings a state of automaticity to our lives: it is like functioning on an autopilot state of being (Bargh et al., 2006). Naturally our brain is hardwired to be intolerant to uncertainty and to resolve uncertainty as quickly as possible. When faced with uncertain situations, we deploy inferences and assumptions to motivate us to move from uncertainty to certainty: uncertainty almost seems like a pain of its own (Kagan, 1972). Perception of uncertainty has been shown to evoke brain activity that engages prefrontal cortical regions known to be involved in safety-signaling and conscious threat appraisal (Morriss et al., 2021). Uncertainty has been known to induce a notable state of stress: uncertainty may induce even more stress than known negative consequences. In a significant study, it was found that the brain actually prefers physical pain over uncertainty. Participants were inflicted with shocks at different times in the experiment, and the state of stress was found to be highest when perceived uncertainty of shock infliction was highest. The level of stress was lesser when the participants were sure that they would receive a shock, as compared to when they were uncertain (de Berker, Rutledge, et al., 2016). In another study, subjects with Social Anxiety Disorder (SAD) were given some hypothetical scenarios in which the outcome could be controlled by the experimenter. It was found that the subjects with SAD preferred negative outcomes in the present versus the uncertainty of the future outcome (Hezel, Stewart, et al., 2019). Through the literature analysis, intolerance of uncertainty was found to be researched upon a lot in domains of psychopathological tendencies, but not a lot of research was done on how it could negatively affect healthy individuals in achieving a fulfilling and meaningful life. A humanistic standpoint regarding intolerance of uncertainty was lacking in our literature analysis. So far we know that uncertainty appraisal can cause psychopathology. This research aims to explore how this can affect attributes like belief in oneself, orientation towards the future and perception of one's own emotions.

Intolerance Of Uncertainty

"Intolerance of uncertainty can be viewed as a dispositional characteristic that results from a set of negative beliefs about uncertainty and its implications and involves the tendency to react negatively to uncertain situations and events" (Dugas, Buhr & Ladouceur, 2004).

Intolerance of uncertainty may be defined as, "a cognitive bias that affects how a person perceives, interprets, and responds to uncertain situations on a cognitive, emotional, and behavioral level. Specifically, intolerance of uncertainty manifests itself by an excessive tendency to find uncertain situations stressful and upsetting, to believe that unexpected events are negative and should be avoided, and to think that being uncertain about the future is unfair" (Dugas et al., 2005).

Intolerance of uncertainty has been proved to have a negative effect on mental well-being (Satici, Saricali, et al., 2020). Intolerance of uncertainty has also been positively correlated with hopelessness (Demirtas, 2020). Reductions in intolerance of uncertainty accounted for a 59% decrease in worry (Bomyea et al., 2015).

Self-Efficacy

The American Psychological Association (2021) defines self-efficacy as "an individual's subjective perception of his or her capability to perform in a given setting or to attain desired results".

Perceived self-efficacy is defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave" (Bandura, 1994).

Self-efficacy is a vital determinant of a person's growth and well-being. Self-efficacy is what determines how a person is going to approach a task that seems difficult and challenging. Individuals who are sure of their capabilities approach tasks with the mindset of facing them as a challenge to be conquered rather than a threat to be avoided (Bandura, 1994).

Self-efficacy has been clearly established as a valid predictor of motivation and learning capabilities of students; it has been recognized as a strong mediator of academic achievement (Zimmerman, 2000). In a study on college students, individuals who reported a strong sense of self-efficacy also tended to procrastinate less on tasks (Haycock, McCarthy, et al., 1998). This again, is consistent with Bandura's theory of self-efficacy where individuals low on self-efficacy tend to become task avoidant as they think they lack the resources to be able to overcome the challenge that the task may propose. People higher on the self-efficacy spectrum not only seek out challenging and meaningful tasks, once they commit, they are more likely to stick to the task and follow through. Their investment in the task and perseverance is higher and in case of setbacks, they bounce back quicker (Schwarzer, 1992).

Optimism

Life orientation is a variable used to measure dispositional optimism as a personal construct (Celestine, 2021). The American Psychological Association (2021) defines optimism as "the attitude that good things will happen and that people's wishes or aims will ultimately be fulfilled". Optimists are people who anticipate positive outcomes, whether serendipitously or through perseverance and effort, and who are confident of attaining desired goals.

Optimism has been positively linked with engagement coping mechanisms during distressing life situations (Carver et al., 2010). Engagement coping is the type of coping where the individual in distress proactively makes attempts to deal with the stressor. Further, Optimists are also more likely to deploy flexible coping mechanisms and adapt them in accordance with the stressor's demands (Carver et al., 2010). Optimism has also been found to be a significant predictor of positive physical health (Rasmussen 2009).

Emotions

The American Psychological Association (2021) defines emotions as "a complex reaction pattern, involving experiential, behavioral, and physiological elements, by which an individual attempts to deal with a personally significant matter or event".

The Broaden and Build theory suggests that although positive emotions do not have an immediate survival value, nonetheless they encourage a person to explore their environment and seek novelty, in turn increasing their survival capability in the long run. Positive emotions award an individual with stronger coping skills and a wider range of emotional toolsets to navigate their environment (Fredrickson, 2004). Positive affect strongly predisposes an individual to perceive life as meaningful (King, 2006).

The prolonged influence of negative emotions like anger and the inability to manage it can drastically reduce the speed of wound recoveries (Gouin, et al. 2008). Negative affect has been found to have a substantial negative impact on the immune functioning as the subjects

exhibited higher levels of bodily inflammations than the norm. On the contrary, positive affect was correlated with lower levels of inflammation (Graham-Engeland, et al. 2018).

People with high negative urgency tend to act rashly in case of emotional distress which is significantly mediated by their intolerance of uncertainty (Pawluk, et al. 2016).

Purpose

The purpose of the study is to measure Intolerance of Uncertainty (IU), Self-Efficacy, Optimism & Emotions in young adults.

Hypothesis

- There will be a significant negative correlation between Intolerance of uncertainty and self-efficacy.
- There will be a significant negative correlation between Intolerance of uncertainty and optimism.
- There will be a significant negative correlation between Intolerance of uncertainty and positive affect.
- There will be a significant positive correlation between Intolerance of uncertainty and negative affect.

METHODOLOGY

Sample

The sample consisted of N=90 young adults (19 to 25 years) ranging from high school graduates to college students. The sample consists of 58.9% females and 41.1% males.

Measures

The following standardized scales were used for the measurement -

- Intolerance of Uncertainty Scale (IUS-12): The IUS-12 is the shortened rendition of the original 27 item Intolerance of Uncertainty Scale developed by Freeston et al., (1994). IUS-12 was developed by Carleton et al., (2007). The scale measures responses to uncertainty, ambiguous situations, and the future. The scale contains 12 items that are rated on a 5-point Likert scale ranging from 1 (not at all characteristics of me) to 5 (entirely characteristic of me). The scale has two subscales, mainly prospective anxiety vs inhibitory anxiety. The scale is a self-administered questionnaire. The scale has good internal consistency (Cronbach's alpha [α] = 0.88).
- The General Self Efficacy Scale (GSE): The GSE scale was developed by Schwarzer & Jerusalem (1995) to assess the general self-efficacy of an individual with a focus on coping and adapting to life stressors. The scale is a 10 item self-report inventory. Each item contains 4-Likert scales ranging from 1 (not at all true) to 4 (Exactly true). Internal reliability for GSE is Cronbach's alphas between $\alpha = 0.76$ and $\alpha = 0.90$ respectively.
- Life Orientation Scale (LOT-R): Developed by psychologist Michael Scheier et al., (1994), the Revised Life Orientation Test (LOT-R) is a 10-item self-report inventory that measures how optimistic or pessimistic people feel about the future. Each item is a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree). The scale has a good internal consistency in terms of Cronbach's alpha that ranged between $\alpha = 0.76$ and $\alpha = 0.79$ respectively.
- Positive And Negative Affect Schedule (PANAS): PANAS is a 20 item self-report inventory developed by Watson, et al (1988). The scale is used to measure the intensity

of positive and negative affect or emotions in an individual. Each item in the scale is scored with a 5-point Likert scale ranging from 1 (very slightly or not at all) to 5 (extremely). The internal consistency of the PANAS scale was found to be Cronbach's α = 0.89 for the Positive Affect subscale and Cronbach's α = 0.85 for the Negative Affect subscale.

Procedure

The study was conducted through the means of google forms. The questionnaires were distributed to the participants and their consent was received and acknowledged. The participants were told that they had to be honest with their answers and they had the right to leave the study midway if they felt uncomfortable in any way or form. The participants were given the instructions through the google form itself and their queries were acknowledged and resolved. Lastly, they were thanked for their contribution to the study.

RESULTS

The Mean, Standard Deviation and Correlations were found out in two tables.

Table 1: Shows the N, mean and standard deviation

	Self-efficacy	IUS	LOT-R	Positive affect	Negative affect
N	90	90	90	90	90
Mean	31.2	31.2	13.9	35.3	24.5
Standard deviation	4.82	9.23	3.85	7.21	7.41

Table 2: Shows the correlation values between the studied variables and their subscales –

	Self- efficacy	IUS	IUS: prospective anxiety	IUS inhibitory anxiety	LOT-R	Positive affect	Negative affect
Self- efficacy	_		-	-			
IUS	-0.193	_					
IUS: prospective anxiety	-0.127	0.947***	_				
IUS inhibitory anxiety	-0.245*	0.921***	0.747***	_			
LOT-Ř	0.425***	-0.211*	-0.128	-0.280**			
Positive affect	0.445***	-0.112	-0.102	-0.109	0.267*	_	
Negative affect	-0.306**	0.389***	0.366***	0.362***	-0.245*	-0.202	_

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

DISCUSSION OF RESULTS

The current literature shows that IU has notable associations with a lot of psychological disorders. It has notable correlations with Major Depressive Disorder, Generalized Anxiety Disorder and Obsessive-Compulsive Disorder (Gentes & Ruscio, 2011). But not many studies have been conducted on the general effect of IU on comparatively healthy individuals. The present study aimed to find how IU not only pushed individuals into psychological disorders but also how it prevented them from living a more fulfilling life. The results indicate that there is a significant negative correlation between Intolerance of uncertainty (IU) and optimism (r= -0.211, p<0.05). There is a significant positive correlation between IU and negative affect (r= 0.389, p<0.001). However, no significant correlations could be found between IU and self-efficacy (r= -0.193) and IU and positive affect (r=-0.112). Hence, the hypotheses that IU is

negatively correlated with optimism, and IU is positively correlated with negative affect are accepted. The results found no significant correlation between IU and self-efficacy and IU and positive affect. It is not surprising that such results were found, IU has not only been found to be correlated with anxiety and worry symptoms but also with depressive symptoms and rumination (Yook et al., 2010). High intolerance of uncertainty has been found to have a negative significant relationship with both well-being as well as self-compassion (Deniz 2021). Moreover, it was found in the results that life orientation significantly and negatively correlates with IU subscale inhibitory anxiety, but not with IU subscale prospective anxiety: In one study, it was found that people high on intolerance of uncertainty are less likely to delay their gratification for a high value reward at a later period of time, and instead chose the low value reward that was presented immediately (Luhmann et al., 2011). The same principle can be applied here: individuals high on IU resolve discomfort in the short run by receding themselves from situations that are uncertain, but in the long run, they deprive themselves of growth opportunities and new experiences which in totality has a negative impact on their life orientation and eventually makes them more pessimistic.

CONCLUSION

The above-conducted research study took the primary variable, Intolerance of Uncertainty (IU) and compared it to variables like self-efficacy, life orientation, positive and negative affect. Although IU was not found to be significantly correlated with self-efficacy or positive affect- IU was significantly negatively correlated with optimism and positively correlated with negative affect. The evidence is clear that the ability to tolerate uncertainty is a vital part of a person's well-being, emotional wellness and contributes to a positive outlook towards life. One proposition as to why uncertainty is so psychologically distressing may be because it disrupts the person's ability to infer any cause or effect by either keeping one or both variables in the dark. Having a tangible piece of information gives a person a sense of control which otherwise is lost when uncertainty strikes, thereby causing discomfort. Regardless, it is advised that individuals learn the ability to handle uncertain situations without catastrophizing and expecting worse outcomes. Healthily dwelling on uncertain scenarios can contribute positively to a person's growth and ultimately rejuvenate and maintain their zest for future opportunities that life has to offer. To be able to withstand uncertainty is the mark of a happy and healthy mind.

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Conflict of Interest

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