

## Academic Paper

# Intolerance of Uncertainty, Unintentional Procrastination and Fear of COVID-19: Investigating associations during the COVID-19 pandemic

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Real brainstorming chart

Intolerance of Uncertainty (IU) is a cognitive construct which is linked to the Unintentional Procrastination behaviour in uncertain situations. This study investigated these associations between Intolerance of Uncertainty and self-reported behaviours such as Unintentional Procrastination and the fear of COVID-19. A total of 130 participants completed self-report measures online created by using three psychometric scales: Fear of COVID-19, Unintentional Procrastination and Intolerance of Uncertainty. Findings suggest that Intolerance of Uncertainty also has associations with Unintentional Procrastination which measures the involuntary delaying of tasks or decisions. In this correlation, the subfactor Prospective IU (Desire of Predictability) is higher with the Unintentional Procrastination. Taking pandemic as an uncertain situation was apt because there was reported change in work schedules, fluctuating or increased anxiety. Therefore higher the intolerance level, higher the tendency to react negatively to uncertain situations correlating with higher levels of involuntary procrastination.

The literature in procrastination has a major perspective from the personality traits and deem it majorly as a dispositional characteristic; however, there is little or no new research concerning why we procrastinate under these COVID-19 pandemic which has altered our behaviours at various levels. Many people reported delay of tasks or decisions, especially due to the pandemic. At the same time, others are viewing this situation in a positive light and thus want to be in control minimizing the uncertainty. This study explored what is the state of productivity, tasks completing abilities and timely decision making. It will analyse and predict how these variables and dynamics weaved and work together to overcome procrastination and improve productivity.

The rationale was to highlight the behavioural changes by measuring procrastination specifically under uncertainty which the pandemic has provided. While figuring out why we procrastinate and how this common behaviour fits into the current crisis environment, it was important to explore the association between the variables especially the new ones like Fear of COVID-19 and study the relationship between them. The result of this study gave a new insight and a clear picture of the scenario. The study employed the online form of collecting data which was deemed as the most feasible and the best way to collect data from a large sample and under the restrictions of lockdown situations in various parts of countries. Access to participants through social media platforms helped reach a wider audience. The target audience was the people who were experiencing COVID-19 pandemic.

The primary purpose was to identify the predictors and study the associations between the variables which are intolerance of uncertainty, unintentional procrastination and the fear of COVID-19. Also to gain insight and understand the role of fear of COVID-19 and intolerance of uncertainty in delaying tasks or decisions unintentionally. In addition, objectives were studied to understand if intolerance of uncertainty can predict the fear of COVID-19 in individuals and the unintentional procrastination.

### **Literature review**

The inability to take action is a general feeling of people navigating through COVID-19 pandemic. They see this situation as unsettling and unfair (Bakioğlu et al., 2020). The idea of connecting literature of pandemic and uncertainty was simple and purposeful as this paper gave a tremendous opportunity to explore the associations between the behaviours and whether external situations play an important role.

People are not only able to predict their own behaviour but also other actions as it is highly correlated with stress and anxiety. (Yildiz & Iskender, 2019). One of the specific behaviours of interest here is procrastination. This behaviour mostly has been described in the spectrum of personal disposition in the decision making subject area and explores why people delay tasks or decisions. This description has an underlying assumption that procrastination is an attribute of a person. For instance, in one of the definitions by Steel, the individual irrationally put off tasks that result in a delay in the expected course of action (Dugas et al., 2004). The literature further limits with other aspects of behaviours such as impulsivity and Type A personality. Steel found the correlation between impulsivity and procrastination, introspecting from an individual characteristic lens (2007). He further found that Type A personality due to impulsivity, motivation tends to decrease as they get distracted by short term temptations (2010). This intertemporal discounting behaviour puts off tasks with long term incentives. This inclusion of time factor in making or delaying decisions is important for this literature as time perception during a pandemic can feel a little abnormal.

Intolerance of uncertainty is a cognitive, emotional and behavioural response that includes skewed systems of knowledge that are triggered by high threats and inaccurate assessments and are related to the inability to cope (Freeston et al., 2020). Inclusion of this concept is crucial as procrastination behaviour is perceived as a challenge that involves uncertainty, innovation and unexpected fluctuations (Yildiz & Iskender, 2019). Buhr & Dugas (as cited in Boswell et al 2013) defined intolerance of uncertainty as a dispositional characteristic that results from a negative belief about uncertainty and its implications and involves the tendency to respond negatively to the uncertain situation at the emotional, behavioural and cognitive level.

Relating to pandemic, it has been also described as an individual propensity to refuse to accept anything negative could occur (Dugas et al., 2004). This indeed is difficult for individuals in pandemic situations because of its unpredictability (Bakioğlu et al., 2020). Buhr and Dugas further explored the levels of ambiguity intolerance dimension. First, it creates feelings of failure to take actions; second, uncertainty is stressful and disappointing; third, unforeseen circumstances are linked with negativity and hence it should be avoided and lastly, uncertainty of future is unreasonable (2002). With these unpleasant emotional upheaval, procrastination can be seen as a tactic for managing these negative feelings (Chun Chu & Choi, 2005). This link is further connected in a direct proportional manner in the sense the more an individual is intolerant to ambiguity, the more unpredictable they will find the situation to be (Freeston et al., 2020).

Shifting from individual disposition lenses and looking from the situational perspective, Ferrari found that due to overwhelming and fluctuating external situations are affecting individuals cognitive capacity which affects the performance (2001). Performance is also a measure of time and during a pandemic this perception of ample amount of time can lead to distorted timelines and hence can affect task performance (Ferrari, 2001). Due to unprecedented course and fluctuations, the exact prerequisite for work is not understood completely. This unclear agendas or task list can hamper the optimal utilization of resources (Fischer, 2001).

Greco & Roger (Boswell et al., 2013) in research has shown that insecurity itself contributes to increased physiological excitement which explains the heightened physical feelings. This increased arousal, emotional distress and loss of perceived control may reflect a physiological weakness for the development and maintenance of emotional disorders (Boswell et al., 2013).

Also this loss of perceived control leads to delay in tasks in chronic procrastinators as they are unable to take decisions rapidly and act upon them (Chun Chu & Choi, 2005). This behaviour leads to uncertainty paralysis which is inability to react efficiently when faced with confusion (Fourtounas & Thomas, 2016). Yet, positive psychology findings have shown that people are resilient. It was found that insight oriented people were motivated by insecurity and they perceive these kinds of situations as an opportunity to learn more about themselves and the world around them (Yildiz & Iskender, 2019). Folkman & Lazarus infer that (as cited in Chun Chu et al., 2005) to deal with stressors, people adopt task oriented strategy in case they feel they can do something positive about their conditions. Excessive concerns help them to deal with the situation efficiently by avoiding negative results and reduce emotional reaction to negative results. To summarise, cognitive interventions could try to minimise the high levels of intolerance of uncertainty by helping clients develop abilities in action and decision making in uncertain situations, detecting and correcting cognitive distortions that can lead to indecisiveness and apply these abilities. Efficient cognitive behavioural approaches to procrastination could also include the sensitivity to ensure circumstances and building of capacity to take action in uncertain situations (Fourtounas & Thomas, 2016).

### **Methods**

The protocol was approved by the university ethics committee. A total of 130 Participants (57.69% women, 41.53% men) completed self-report measures through online google survey form. Most participants (46.92%) were graduates and (38.46%) were postgraduates including doctorates, while the remainder were diplomas and others. Most participants reported being either employed (34.61%) or as students (32.30%). There were about (16.15%) of total participants

who were employed as well as were students. Participants below age 18 were excluded; 46.9% were aged between 18 to 24 years, 25.4% were aged 25–30 and 27.7% over 30. Most participants (83.07%) were not having any COVID-19 symptoms, only (8.46%) were experiencing partial symptoms and about (6.92%) reported positive that they had history. Among participants (76.92%) were single.

### **Measures**

**The Intolerance of Uncertainty Scale, Short Form (IUS-12;** Carleton et al., 2007) is a 12-item version of the original 27-item IUS (IUS-27; Freeston, Rheume, Letarte, Dugas, & Ladouceur, 1994; English translation: Buhr and Dugas, 2000), which strongly correlates with the original scale ( $r=0.96$ ; Carleton et al., 2007). Factor analysis studies have found that the IUS-12 is made up of two subfactors (reviewed in Birrell et al., 2011). Seven items assess the Prospective IU (Desire for Predictability) and five assess the Inhibitory IU (Uncertainty Paralysis).

**The Unintentional Procrastination Scale** is a scale (Fernie et al., 2017) which assesses Unintentional Procrastination and consists of 6 items, such as “Often I mean to be doing something, but it seems that sometimes I just don't get around to it.” and “I really want to get things finished in time, but I rarely do”. The UPS possesses discriminant, construct, and concurrent validity, as well as good internal consistency.

**The Fear of COVID-19 Scale:** The FCV-19S scale (Ahorsu et al., 2020) is a unidimensional scale with 7 items. It has a 5-point Likert-type rating system (ranging from 1: Strongly disagree to 5: Strongly agree).

**The Personal Information Form:** This form was used to collect the demographic information of the participants. To collect data, participants were asked questions about their age, gender, occupational status, education level, marital status, and whether they have any previous history of COVID-19.

### **Analysis and Results**

While doing the analyses, normal distribution assumptions were checked and data were not normally distributed, hence Spearman correlation analysis was performed. A series of separate linear regression analyses was performed with each of the behavioural variables (Unintentional Procrastination, Fear of COVID-19) as dependent variables and Intolerance of Uncertainty entered as independent variables, to determine the unique contribution of each variable in predicting the dependent variable. IBM SPSS Statistics software package was used for the analysis of the study data.

Intolerance of Uncertainty was significantly positively correlated with the behavioural variables assessed namely Fear of COVID-19 and Unintentional Procrastination. Consequently, both IUS-12 subfactors (Inhibitory IU and Prospective IU) were also correlated with Fear of COVID-19 and Unintentional Procrastination. Fear of COVID-19 was not significantly associated with Unintentional Procrastination. Table 2 Shows the linear regression result of Independent variable being Intolerance of Uncertainty and Dependent variable being Fear of Covid-19.



**Table 1**  
**Spearman's correlations**

	F	U	P	I	IOU
Fear of Covid-19	1.00	.121	.308**	.253**	.307**
Unintentional Procrastination		1.00	.282**	.444**	.402**
Prospective IU			1.00	.602**	.897**
Inhibitory IU				1.00	.882**
Intolerance of Uncertainty					1.00

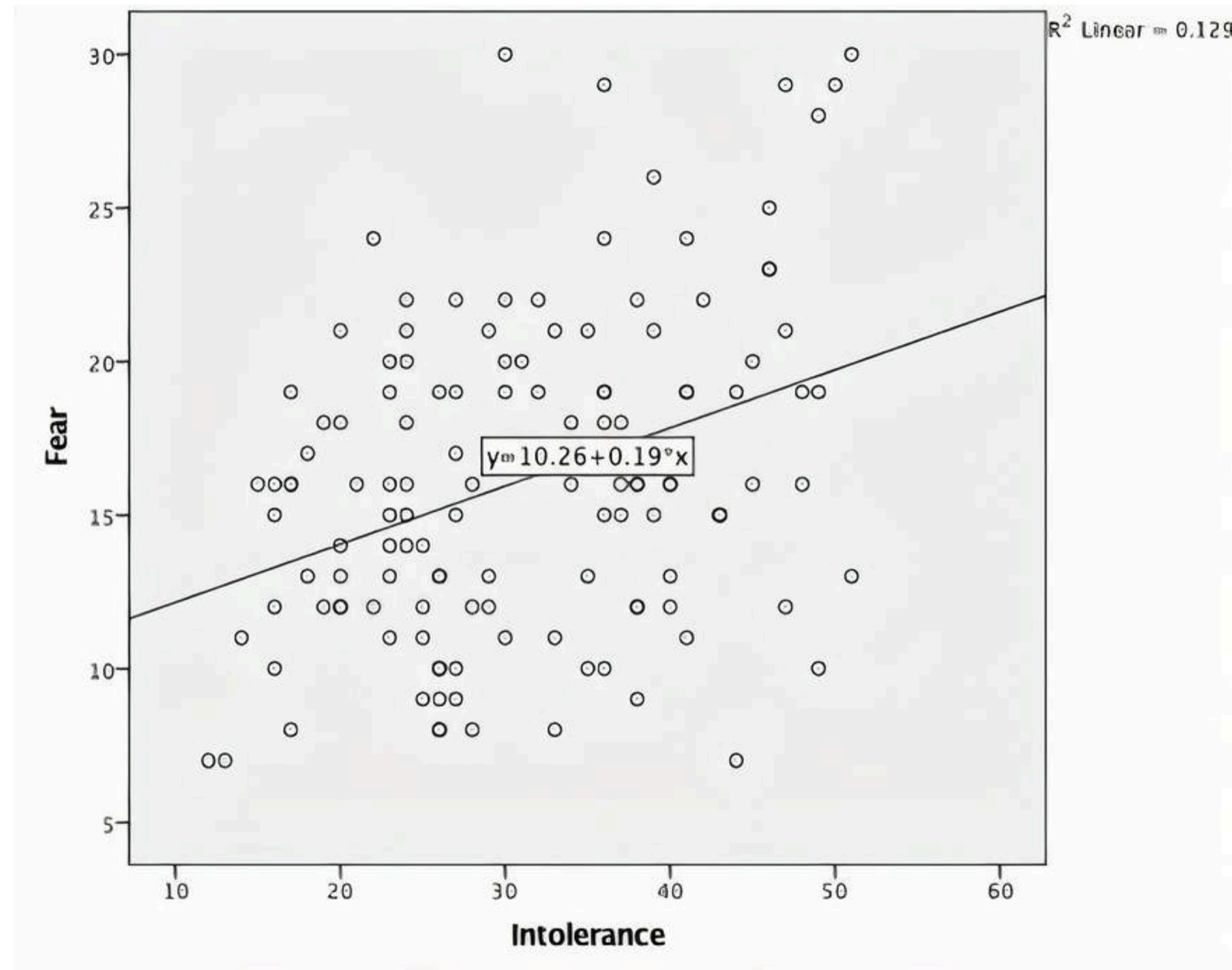
\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 2**  
**Linear regression between Intolerance of Uncertainty and Fear of COVID-19**

Model	Sum of Squares	df	Mean Square	F	Significance
Regression	460.937	1	460.937	18.878	.000b
Residual	3125.340	128	24.417		
Total	3586.277	129	129		

a. Dependent Variable: Fear of COVID-19  
b. Predictors: (Constant), Intolerance of Uncertainty

Figure 1 Linear regression between Intolerance of Uncertainty (X-Axis) and Fear of Covid-19 (Y-Axis)



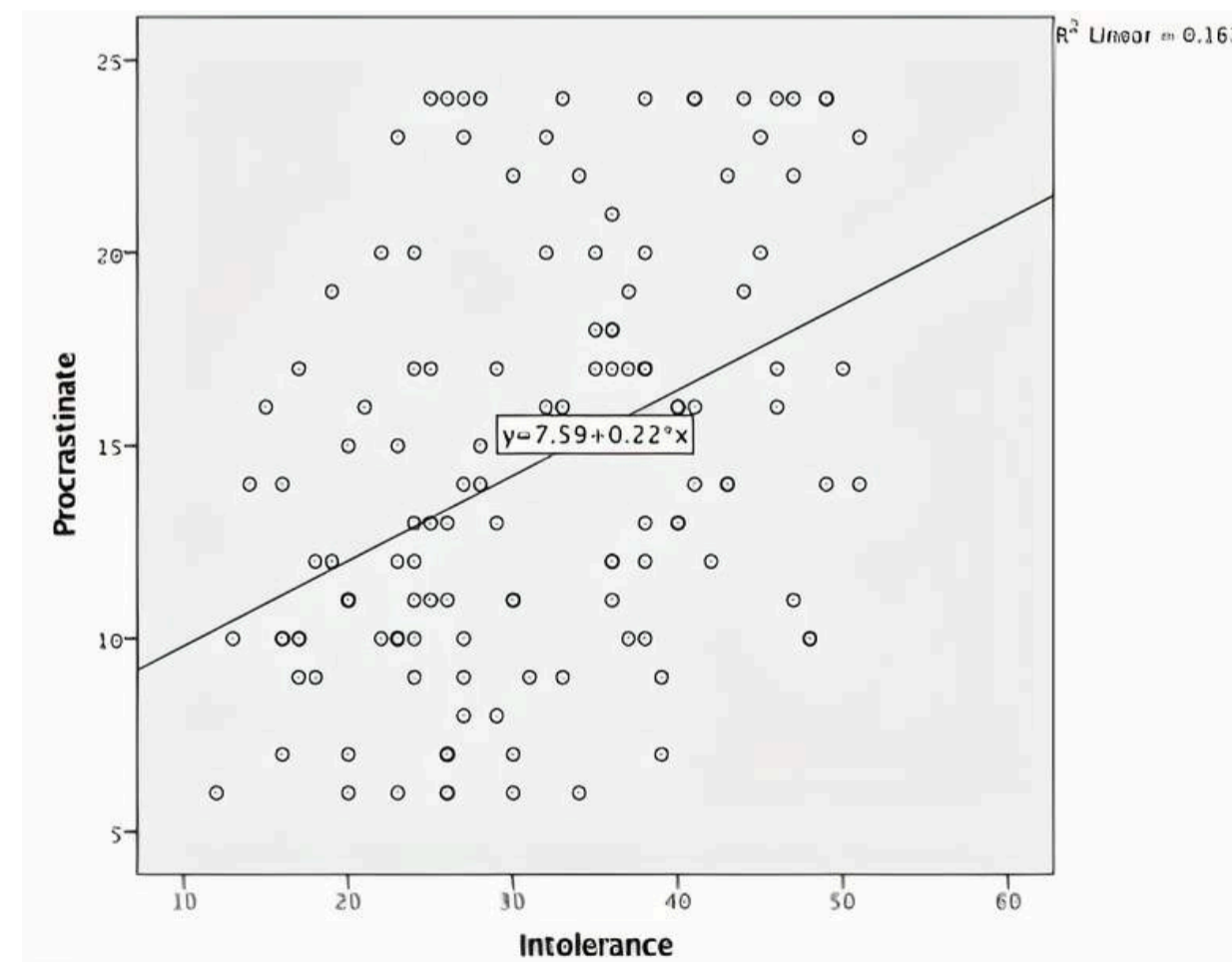
**Table 3**

**Linear regression between Intolerance of Uncertainty and Unintentional Procrastination**

Model	Sum of Squares	df	Mean Square	F	Significance
Regression	630.187	1	630.187	24.986	.000b
Residual	3228.313	128	25.221		
Total	3858.500	129			

a. Dependent Variable: Unintentional Procrastination  
b. Predictors: (Constant), Intolerance of Uncertainty

**Figure 1 Linear regression between Intolerance of Uncertainty (X-Axis) and Fear of Covid-19 (Y-Axis)**



## **Discussions**

The COVID-19 pandemic had become a global catastrophe at the time this dissertation was conducted. It has been essential to analyse the behavioural changes and effects of the pandemic in order to learn the specific behaviours of procrastination and its associations between intolerance of uncertainty and fear of COVID-19. The findings indicated that Intolerance of Uncertainty was significantly positively correlated with the behavioural variables Fear of COVID-19 and Unintentional Procrastination. As a result of the analysis, the hypothesis concerning the relationship between intolerance of uncertainty and unintentional procrastination was confirmed. This result is an extension of the previous findings conducted with the other types of procrastinations such as academic procrastination.

It is now well established that intolerance of uncertainty also has associations with unintentional procrastination which measures the involuntary delaying of tasks or decisions. In this correlation, the subfactor Prospective IU (Desire of Predictability) is higher with the unintentional procrastination. Taking pandemic as an uncertain situation was apt because there was reported change in work schedules, fluctuating or increased anxiety etc. Therefore higher the intolerance level, higher the tendency to react negatively to uncertain situations correlating with higher levels of involuntary procrastination.

In accordance with another hypothesis, the association between the intolerance of uncertainty and Fear of COVID-19 was also listed and this also came as a positive correlation. If we discuss on subfactor level both IUS-12 subfactors (Inhibitory IU and Prospective IU) were also correlated with Fear of COVID-19, Prospective IU (Desire for predictability) being more correlated than Inhibitory IU. This is an important insight as this study confirms the newly established correlation between the uncertainty paralysis and the Fear of COVID-19 as uncertainty paralysis is an important cognitive factor reflecting tendencies to freeze during uncertainty, which predicts unintentional procrastination as well. However there was no correlation found between the Unintentional Procrastination and the Fear of COVID-19.

The results provide the first evidence of an association between the Intolerance of Uncertainty with the behavioural variables Fear of COVID-19 and Unintentional Procrastination. The findings provide that Intolerance of Uncertainty can predict the fear of COVID-19. This provides support for the hypothesis that Intolerance of Uncertainty can instill anxiety and hence consequently fear of COVID-19 which is an instance of pandemic and uncertain situations. The subfactors Inhibitory IU (Uncertainty Paralysis) and Prospective IU (Desire for Predictability) also predict in similar lines. Furthermore, associations of Intolerance of Uncertainty with the Unintentional Procrastination can also suggest that Intolerance of Uncertainty can predict the unintentional delay or postponement of a task or decision which is often conceptualised as a failure of self-regulation.

## References

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**Thank you!**