



RQ: To What Extent Does Anxiety Lead To Procrastination Behaviour In A Group Of High Schoolers From India?

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Abstract

Anxiety disorders are the most common of all mental disorders on a global scale. There are varying forms of anxiety disorders with each having its own characteristics and associated symptoms. The level of anxiety disorders in a specific population may largely be dictated by socio-cultural factors. Moreover, those suffering from anxiety disorders often find these intervening with their daily as well as academic lives specifically as a result of partaking in procrastination behaviour. Considering all the aforementioned, this research paper aims to conduct a thorough review of anxiety disorders and their link with procrastination prior to conducting an intensive analysis to derive the prevalence of anxiety disorders in high schoolers from India and further evaluate how this influences procrastination behaviours amongst the sample population.

Key Words: Anxiety Disorders, Procrastination, High Schoolers, India

1. Introduction

As per the American Psychology Association (2022), anxiety is defined as “an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure”. As per data released in 2019, it was reported that an estimated 4% of the world population suffers from some form of anxiety disorder making anxiety the most common of all mental disorders (World Health Organization, 2023). With regard to the types of anxiety disorders, they differ based on the symptoms and triggers but are largely recognized as generalised anxiety disorder (GAD), Panic disorder, Phobia-related disorder and Social anxiety disorder (National Institute of Mental Health, 2023). Referring to the aforementioned point, while symptoms may vary between the different types of anxiety disorders, some common ones are trouble concentrating and making decisions, a sense of irritability and restlessness, the tendency to experience abdominal distress, heart palpitations and trembling among many others. Procrastination, on the other hand, is defined as “a form of self-regulation failure characterized by the irrational delay of tasks despite potentially negative consequences” (Prem et al., 2018). People who procrastinate have long been made to feel as though they are merely lazy. However, researchers and psychologists such as Dr Tim Pychyl, professor of psychology and member of the Procrastination Research Group at Carleton University in Ottawa, have argued that “procrastination is an emotion regulation problem, not a time management problem” (Lieberman, 2019).

Whilst anxiety and procrastination may be distinct, they both share some similarities. Firstly, it would be valid to argue that cultural factors greatly influence the manner in which both anxiety and procrastination are perceived in a specific community. Secondly, the levels of both anxiety and procrastination differ between age groups but tend to be relatively higher in high school and university-going students. Taking the aforementioned into consideration, this research paper aims to answer the following question: ***"To what extent does anxiety lead to procrastination behaviour in a group of high schoolers from India?"***

By focusing specifically on India, a country wherein mental health stigmas still persist and the educational system is characterized by intense pressure and workload, this research paper aims to argue that high schoolers suffering from anxiety will naturally also exhibit procrastination behaviours and more recognition and resolution is required for the same.

2. Literature Review and Hypothesis

Referring back to anxiety, it is essential to highlight that anxiety is a normal part of life whereby many people tend to worry about matters pertaining to health, money or family. However, anxiety disorders differ in their tendency to be more than temporary worry or fear. Anxiety disorders refer to anxious feelings that may not go away and instead worsen over time. Such disorders are also linked with symptoms that can interfere with daily life including one's performance at their job or school.

2.1 Types of Anxiety Disorders

Elaborating further on the different types of anxiety disorders, as mentioned in the introduction, four primary types may be identified with their respective symptoms (American Psychiatric Association, 2021). Firstly, *generalized anxiety disorder (GAD)* refers to persistent and excessive worry that interferes with daily activities and this type of anxiety, when present mildly or in extremes, can be accompanied by physical symptoms including restlessness, fatigue, sleeping problems and difficulty concentrating. It is also common for the worries in such anxiety to be linked with everyday things. Secondly, *panic disorder* is associated with a combination of high levels of physical and psychological distress characterised predominantly by the recurrence of panic attacks. Such attacks tend to be associated with symptoms such as sweating, trembling and/or shaking, palpitations, chest pain as well as feelings of detachment and loss of control. Third, *phobia-related anxiety* is linked with the persistent fear of a specific situation, activity or object which is generally not deemed harmful. Patients who have this type of anxiety are normally aware of their fear but unable to overcome it which may lead to high levels of distress in the long run. Finally, *social anxiety disorder* is associated with feelings of anxiousness and discomfort in social situations and interactions primarily due to a fear of being embarrassed, humiliated, rejected or looked down on. People who suffer from this type of anxiety may find it interfering with their daily life as it prevents them from meeting new people, eating or drinking in public as well as public speaking.

2.2 The Causes of Anxiety and Anxiety Disorders

Concerning the question of what causes anxiety and anxiety disorders, there are a variety of factors which may be internal or external. For instance, anxiety disorders could be linked with underlying health issues on an internal front. However, external factors can have a large influence as well. A 2018 review confirms that "environmental factors can increase the likelihood of anxiety. For example, a person's family composition, their cultural and religious upbringing, and many other childhood experiences can influence anxiety levels" (Nechita et al., 2018). Culture, particularly, has been studied in detail with regard to its connection with mental health. Culture has a large influence on how individuals perceive the world and themselves, cope with anxiety, present mental disorders as well as get diagnosed and treated for the same. Some cultures, for instance, are incredibly competitive and this may affect the manner in which an individual values their own achievements. Comparisons with the wider population can trigger anxiety in individuals making them feel as though they are not 'enough'. Moreover, when detailing how culture affects how populations cope with anxiety; it has been observed that in some cultures it is deemed more acceptable to express emotions whilst in others emotional restraint may be the norm (Therapy Brands, 2022). In a culture following the latter norm, it could be expected

that individuals withhold their anxiety due to feeling ashamed or in fear of being 'different' - which may only worsen it in the long run.

Considering the example of India, specifically, a relatively older but important study by Reddy and Chandrashekhar (1998) found neurotic disorders to have the highest estimated prevalent rate, 20.7%, as part of which phobia and GAD (two forms of recognised anxiety disorders) had weighted prevalence values of 4.2% and 5.8% respectively. It was also found that urban communities had higher prevalence rates than rural communities. The prominence of anxiety disorders in the country has only increased in recent times making it relevant to study their causes as well as potential impact on different populations. In the case of education, particularly, the culture created in the country is one that thrives on competition and places great importance on achievement. Many reports have highlighted how education in India is the ultimate leveller whereby parents are happy to dish out unlimited resources to ensure that their children attend the best schools and do well (Kar, 2018). Whilst such a culture may give birth to incredible talents, studies have found how "within India's highly competitive education system, the pursuit of top grades and entrance exam scores is akin to a high-stakes game, leaving students grappling with anxiety attacks, low self-confidence, depression, and, tragically, suicidal tendencies" (George, 2023).

2.3 Anxiety and Procrastination Behaviour

The prevalence of anxiety disorders amongst students in India triggered primarily due to cultural factors, can also have knock-on effects and impact their daily lives and academics in several ways. Procrastination, for example, is found to be a result of coping with challenging emotions and negative moods (Lieberman, 2019) - all of which can be associated with those who suffer from anxiety disorders. This stands particularly true for students. Anxiety may lead to procrastination, in daily life and academic work, as individuals with anxiety disorders may strive for perfectionism, continuously worry, feel overwhelmed and suffer from low self-esteem (Star, 2020).

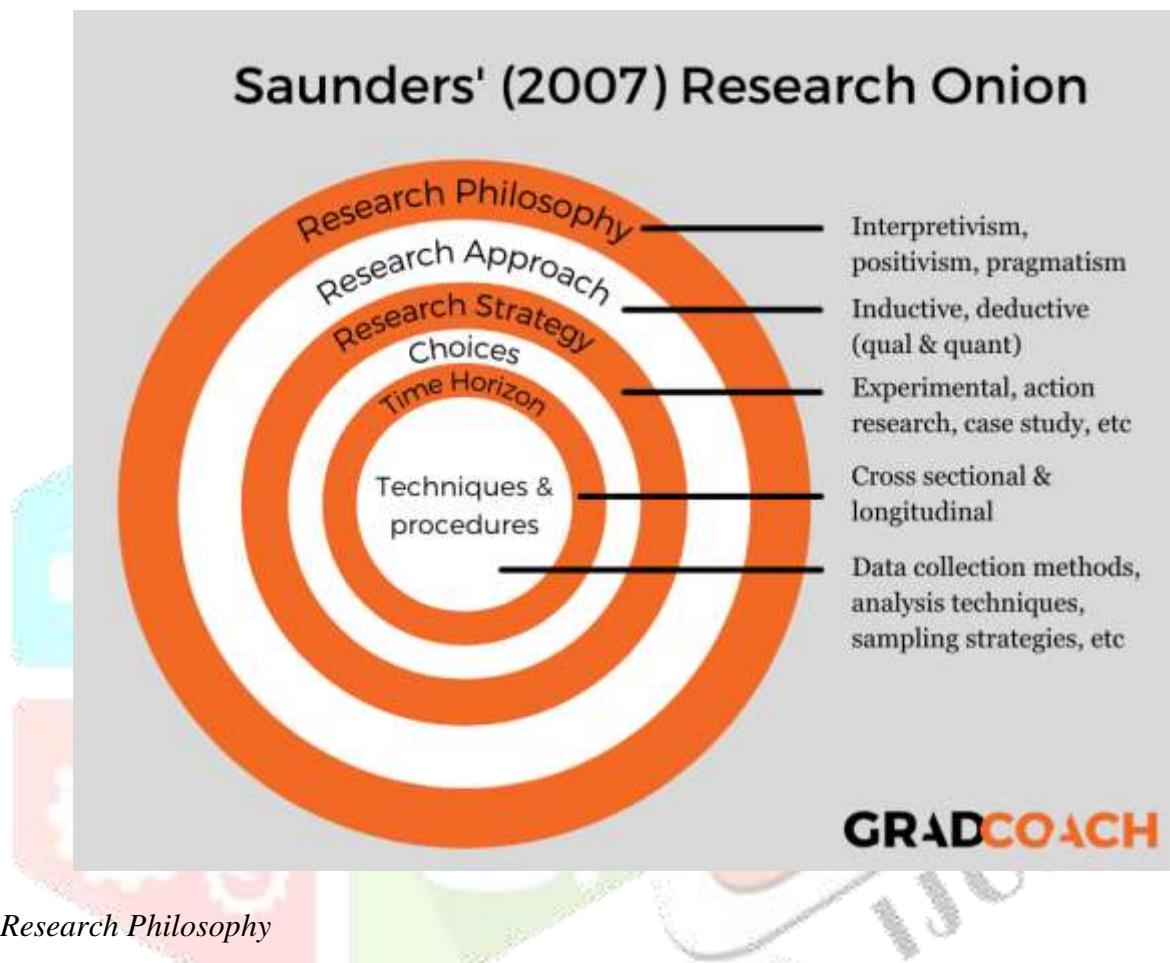
2.4 Hypothesis

Considering all the above, this research paper hypothesizes that *High schoolers from India are likely to suffer from anxiety disorders which will lead to them engaging in procrastination behaviour.*

3. Research Methodology

3.1 Research Onion

To ensure a thorough methodology for this study, the research onion by Saunders et al (2007) will be used as it encourages the researchers to make different decisions with regard to developing the appropriate methodology by working from the outside of the onion to inwards. A sample image of the research onion is below:



3.1.1 Research Philosophy

The very first layer of the onion is the research philosophy which refers to the set of beliefs that the research is built upon. The three main research philosophies are positivism, interpretivism and pragmatism. This research adopts an *interpretivist* philosophy as it focuses heavily on the thoughts and feelings of the participants whilst also considering the socio-cultural factors and how they may influence such emotions.

3.1.2 Research Approach

The second layer of the research onion considers the research approach which refers to the broader method which will be used in the study. The two approaches that are recognized at this stage are an inductive and deductive approach. This research adopts an *inductive* approach primarily because this study aims to understand and explore certain experiences, behaviours and perceptions of the participants and inductive reasoning is well-suited for studies that aim to gather insights based on specific observations or cases.

3.1.3 Research Strategy

The third layer of the onion is concerned with the research strategy which details how the research will be conducted. There are several strategies which may be adopted including experimental research, action research and case study research among others. This research especially follows a *case study* research strategy as it aims to conduct an in-depth study of a certain subject, i.e. the influence of anxiety on procrastination behaviour, amongst a defined group, i.e. high schoolers in India. Another reason this strategy is appropriate is because it

encourages researchers to take the socio-cultural context into consideration which, as mentioned above, is vital for this study.

3.1.4 Research Choice

The fourth layer of the onion deals with the research choice which is essentially concerned with how many data types may be used in the research. Out of mono, mixed or multi-method, this study pursues a mixed-method approach whereby both qualitative and quantitative findings are gathered as per responses from the target audience to a structured online questionnaire.

3.1.5 Time Horizon

The fifth layer of the onion deals with the time horizon i.e. how many points in time data will be collected for the research. The two options available are cross-sectional and longitudinal wherein the former relates to data collected at a certain point in time whereas the latter is concerned with data collection over multiple points in time. This research follows a cross-sectional time horizon as it entails participants responding to a questionnaire at a given point in time and not across different time points.

3.1.6 Techniques and Procedures

This study makes use of an online questionnaire shared with high schoolers in India. The questionnaire is made up of open-ended and close-ended questions with the aim of gathering both quantitative and qualitative insights. The questions are primarily concerned with gauging if the high schoolers struggle with anxiety disorders, what symptoms they experience as well as if and how the anxiety intervenes with their daily lives and academics. Whilst the questions have been worded carefully to avoid any bias, the primary habit for which confirmation is being looked for in the responses pertains to procrastination - in line with the hypothesis and main aim of the study.

It is important to highlight that the questionnaire was circulated to 50 high schoolers in India spread across 5 different states, however, the final responses were generated from a total of 30 students spread across the states of Haryana, Uttar Pradesh and Delhi. The sample population for the purpose of this study is thus 30 participants representative of the 3 states.

Finally, the procedure which will be utilized to analyse the data is a thematic analysis. Thematic analysis was chosen as it is a very popular analysis approach in the field of psychology as it entails identifying patterns that emerge in the data gathered from several participants. The ability to identify patterns stood essential for this study as it was primarily concerned with understanding the manner in which anxiety disorders manifest in the sample population as well as the relationship between such disorders and procrastination.

3.2 Research Bias

Bias in research is commonly defined as “systematic error [is] introduced into sampling or testing by selecting or encouraging one outcome or answer over others” (Merriam-Webster, 2019). Bias can occur at varying stages of the research and it is essential to recognise and attempt to mitigate or minimize the impact of these biases to the best of the researcher's abilities. The table below provides an overview of some of the main research biases whilst explaining how each was mitigated in this research study.

Bias	Definition (Smith and Noble, 2014)	Mitigation
Design bias	Design bias can occur when a researcher's personal beliefs influence the choice of the research question and methodology.	Design bias was mitigated in this study as the research question was developed in light of the research problem which was influenced by a thorough literature review. Furthermore, bias in the methodology was eliminated by the adoption of the research onion whereby the researchers made choices at each stage of the onion supported by concrete reasoning.
Selection bias	Selection bias relates to both the process of recruiting participants and the study's inclusion criteria.	It may be acknowledged that this study had a certain degree of selection bias as the participant inclusion criterion was specific to a certain target population i.e. high schoolers in India. However, the impact of such bias was minimized by including high schoolers attending different schools across different regions of India.
Data collection bias	Data collection bias can occur when a researcher's personal beliefs influence the way information or data is collected	Data collection bias was mitigated in this study by approaching the participants with a structured online questionnaire that contained a good mix of open-ended questions yielding qualitative responses and close-ended questions yielding more quantitative responses. This mixed method approach helps to triangulate the findings and mitigate any bias in data collection.
Analysis bias	When analysing data, the researcher may naturally look for data that confirm their hypotheses or confirm personal experience, overlooking data inconsistent with personal beliefs	The paper made use of a thematic analysis whereby a strong coding framework, based on concrete evidence from the participant responses, was developed prior to deriving any themes which aided the eventual discussion and hypothesis acceptance or rejection. The aforementioned mitigates the analysis bias to a great extent.

3.3 Ethical Considerations

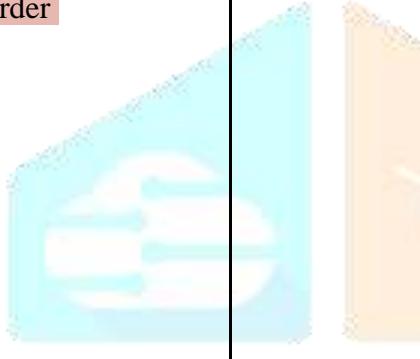
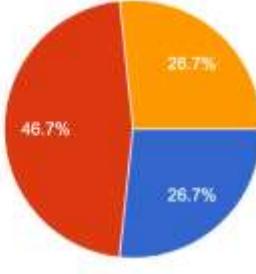
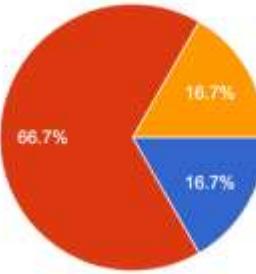
This research study entailed the collection of personal information and perspectives on sensitive issues such as anxiety. In light of the aforementioned, it was essential to adhere to ethical considerations and therefore all participants were informed of the purpose of the questionnaire and the manner in which their responses would be used. Moreover, the participants were also guaranteed anonymity in the use of their responses and at the time of analysing and publishing the data.

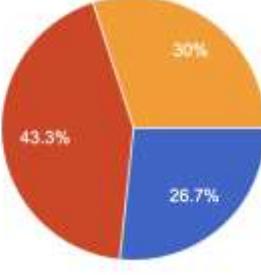
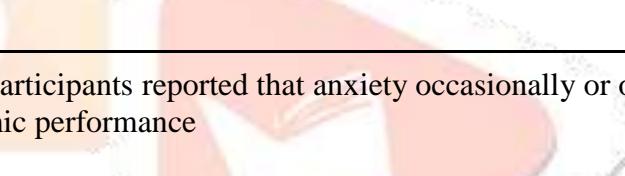
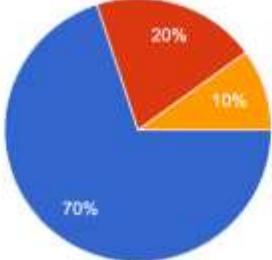
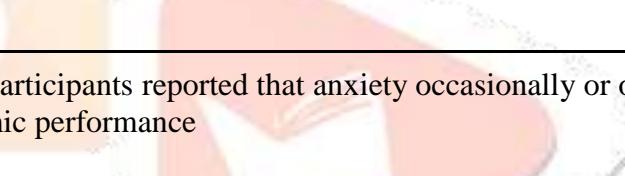
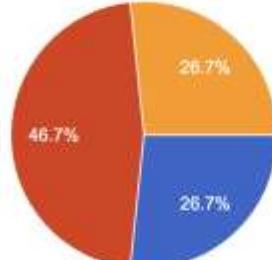
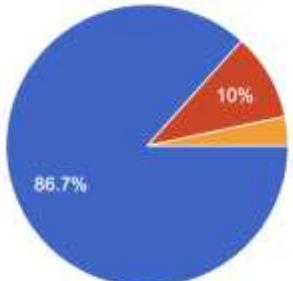
4. Data Analysis - Thematic Analysis

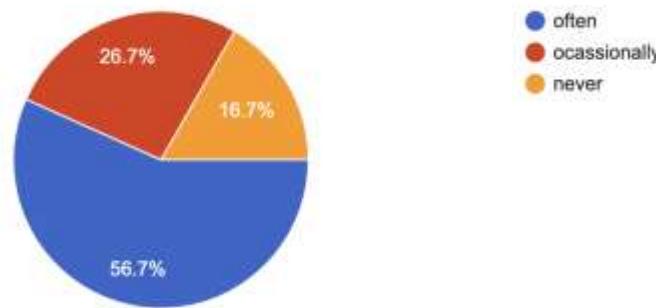
4.1 Coding

The first stage of the thematic analysis is to identify appropriate codes from the research conducted. The table below elaborates on the codes identified based on the questionnaire responses obtained from high schoolers in India. The supporting evidence is also provided for each code.

**The codes below have been colour-coded to correspond with the respective themes they associate with in the second table*

Codes	Evidence
High schoolers in India may suffer from mild to extreme Generalised Anxiety Disorder	<p>When asked about experiencing physical symptoms of anxiety, around 73.4% of the participants answered that they often or occasionally experience the same. Physical symptoms are often associated with mild and extreme Generalised Anxiety Disorder leading to the generation of this code</p>   <ul style="list-style-type: none"> often occasionally never
Anxiety interferes with the daily life of high schoolers in India	<p>When asked if anxiety interferes with their daily lives, around 66.7% of the participants answered 'occasionally' whilst 16.7% answered 'often'. This implies that the majority of the participants feel as though anxiety interferes with their daily life most of the time if not all the time</p>   <ul style="list-style-type: none"> often occasionally never
Social anxiety disorder, a type of anxiety disorder, is common among high schoolers in India and interferes with their lives	<p>When asked: "Do social situations make you anxious?", 70% of the participants responded with either occasionally or often. This supports the idea that social anxiety disorder, which is often associated with individuals feeling anxious in social situations, is common in high schoolers in India</p>

	 <table border="1"> <thead> <tr> <th>Tendency</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>often</td> <td>70%</td> </tr> <tr> <td>occasionally</td> <td>30%</td> </tr> <tr> <td>never</td> <td>0%</td> </tr> </tbody> </table>	Tendency	Percentage	often	70%	occasionally	30%	never	0%
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<p>Tendencies to delay tasks are present in high schoolers in India</p> 	<p>A large percentage of participants, 70% to be precise, stated that they often delay tasks until the last minute</p>   <table border="1"> <thead> <tr> <th>Tendency</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>often</td> <td>70%</td> </tr> <tr> <td>occasionally</td> <td>20%</td> </tr> <tr> <td>never</td> <td>10%</td> </tr> </tbody> </table>	Tendency	Percentage	often	70%	occasionally	20%	never	10%
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<p>Anxiety has an impact on the academic performance of high schoolers in India</p> 	<p>Around 73.4% of the participants reported that anxiety occasionally or often has an impact on their academic performance</p>   <table border="1"> <thead> <tr> <th>Impact</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>occasionally</td> <td>46.7%</td> </tr> <tr> <td>often</td> <td>26.7%</td> </tr> <tr> <td>never</td> <td>26.7%</td> </tr> </tbody> </table>	Impact	Percentage	occasionally	46.7%	often	26.7%	never	26.7%
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<p>Tendencies to delay or put off academic tasks and difficulty in concentrating on such tasks are present in high schoolers in India</p> 	<p>When asked specifically about academic tasks such as projects and submissions, findings suggest that a large 86.7% of the participants reported often delaying the start of such tasks till right before the deadline</p>   <table border="1"> <thead> <tr> <th>Tendency</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>often</td> <td>86.7%</td> </tr> <tr> <td>occasionally</td> <td>10%</td> </tr> <tr> <td>never</td> <td>3%</td> </tr> </tbody> </table> <p>Lastly, around 56.7% of the participants reported that they often find it difficult to stay focused on academic tasks that they are completing</p>	Tendency	Percentage	often	86.7%	occasionally	10%	never	3%
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4.2 Themes

Theme	Definition
Theme 1: Highschoolers in India suffer from mild to extreme Generalised Anxiety Disorder	It can be deciphered that a large percentage of the group of high schoolers in India who participated in this study suffer from mild to extreme Generalised Anxiety Disorder based on the symptoms they have confirmed experiencing including physical ones.
Theme 2: Anxiety in highschoolers in India interferes with their daily lives	The high schoolers in India who participated in this study confirm a tendency for their anxiety to interfere in their daily lives as evidenced in habits such as delaying or avoiding tasks till the last minute as well as feeling anxious in social situations.
Theme 3: Anxiety in high schoolers in India interferes with their academic work	A large percentage of the high schoolers in India who participated in this study confirm that their anxiety interferes with their academics primarily as a result of their tendency to delay academic tasks as well as lack of concentration when completing tasks.

5. Discussion

As per the findings in the literature review, the hypothesis created for this study was as follows:

High schoolers from India are likely to suffer from anxiety disorders which will lead to them engaging in procrastination behaviour.

As per theme **THEME 1**, it is evident that high schoolers in India struggle with anxiety and that their symptoms are very much in line with those suffering from mild or extreme Generalised Anxiety Disorders. The reason for this prevalence of anxiety disorders within the sample population may once again lie in the socio-cultural influencers with regard to the context of India. The students who answered were between the ages of 15-18 implying that they are completing the final years of their schooling; this is a time already known to be characterised by higher levels of stress but the competitive nature of Indian educational institutes and pressure from families and society to do well could lead to the participants struggling with anxiety disorders.

Moving our focus to **THEME 2**, it is evident that high schoolers in India find their anxiety disorders intervening with their daily lives. This has been confirmed in the responses received whereby a large percentage of the respondents highlighted how their anxiety causes them to delay day-to-day tasks as well as struggle in social situations. The latter could also represent the presence of Social anxiety disorder, another form of anxiety disorder, in the sample population.

Finally, **THEME 3** helps uncover the manner in which anxiety disorders influence the academic work and performance of high schoolers in India. Whilst not explicitly mentioned, tendencies to delay academic tasks till right before the deadline or even find it difficult to concentrate on academic tasks can signify the presence of procrastination behaviours in the sample population. The reason these findings have been derived is that the aforementioned behaviours are in line with the definition of procrastination and the argument of how the presence of anxiety disorders can influence such procrastinative behaviour (referred to in the introduction and literature review).

As a result of the above, it would be valid to **ACCEPT** the hypothesis whereby it can be said that high schoolers from India do often suffer from anxiety disorders which commonly leads to them engaging in procrastination behaviour.

6. Conclusion and Limitations

Given that varying socio-cultural factors may dictate the prevalence of anxiety disorders amongst populations and such disorders can lead to certain behaviours including procrastination, this research paper set out to examine if high schoolers in India suffering from anxiety disorders also exhibit procrastination behaviours, in both their daily and school lives.

Based on the data redacted from the questionnaire conducted with a total of 30 high schoolers in India spread across 3 main states, it is evident that firstly such high schoolers do exhibit symptoms in line with General Anxiety Disorders as well as Social Anxiety Disorders. More importantly, however, is the high confirmation of the participants in their tendency to partake in procrastination behaviours such as delaying their academic work till right before the deadlines and even having trouble concentrating on day-to-day as well as academic tasks. This further confirms the link between anxiety disorders and procrastination.

Whilst this research paper provides a conclusive answer and findings based on the primary research conducted, it is essential to acknowledge some limitations which may have occurred in the design and execution of this research. Firstly, whilst the participants encouraged to partake in the online questionnaire were high schoolers spread across 5 different states of India, the respondents ended up representing only 3 of the states. The aforementioned suggests that the inclusion of high schoolers from a larger number of Indian states could have led to conclusions which were more representative of the wider body of higher schoolers in India. Furthermore, more perspectives could have been included in the study such as that of parents or teachers of the high schoolers so as to understand not only more of the social implications and perceptions of anxiety and procrastination but also the manner in which those around the students are able to observe and infer such behaviours. Overall, the limitations may inform a revised and more effective study in the future.

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