A COMPARATIVE STUDY OF MOTIVATIONAL FACTORS AND PERSONALITY TRAITS IN ACADEMIC AND NON-ACADEMIC PROCRASTINATORS

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DECLARATION

I hereby declare that this thesis entitled "A COMPARATIVE STUDY OF MOTIVATIONAL FACTORS AND PERSONALITY TRAITS IN ACADEMIC AND NON-ACADEMIC PROCRASTINATORS" is an original piece of work done by me for the award of the degree of Doctor of Philosophy in Psychology. I also declare that this thesis or any part of it has not been submitted by me for the award of any degree, diploma, title or recognition before.

Jasmine Kaur

CERTIFICATE

I hereby certify that this thesis entitled "A COMPARATIVE STUDY OF MOTIVATIONAL FACTORS AND PERSONALITY TRAITS IN ACADEMIC AND NON-ACADEMIC PROCRASTINATORS" embodies the study and research carried out by Jasmine Kaur under my supervision and guidance for the fulfillment of the requirements for the degree of Doctor of Philosophy in Psychology.

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ABSTRACT

Procrastination involves delaying of tasks or activities till the deadline approaches. The pattern of procrastination with its negative effects is spread in all major areas of life. It is particularly prevalent in the academic setting where students have lots of things to do in limited time. The present research studies the association of academic and non-academic procrastination in relation to motivation factors- Intrinsic Motivation, Extrinsic Motivation, and Amotivation (based on the Self-Determination Theory by Deci & Ryan, 1985) and personality traits- Openness to experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism (based on the Five Factor Model by McCrae& Costa, 1996).

A total of 600 participants (457 males &143 females) - 300 high procrastinators and 300 low procrastinators, in the age group 17-19 years were selected for the study. All of them studied in the undergraduate courses of technical colleges of Punjab. The tools used were- Procrastination Assessment Scale-Students (PASS) developed by L. J. Solomon and E. D. Rothblum (1984), General Procrastination Scale (GPS) developed by C.H. Lay (1986), Academic Motivation Scale (AMS) developed by R. J. Vallerand et al. (1992) and Big Five Inventory (BFI) developed by V. Benet-Martinez and Oliver P. John (1998).

The statistics used to analyze the data obtained were t-test, 2X2 ANOVA, percentage analysis and chi-square test. T-test analysis indicated that high and low academic procrastinators differ in their non-academic procrastination tendencies emphasizing the fact that procrastination is a habit because of which an individual delays performing tasks or initiation of a task irrespective of the field, academic or non-

academic.2X2 ANOVA for the factors of motivation revealed a significant difference between high and low, academic and non-academic procrastinators on intrinsic motivation and amotivation with high procrastinators possessing more of amotivation and less of intrinsic motivation. This indicates that students delay tasks because they do not possess intrinsic intellectuality and innate psychological need for competence or they do not have a sense of purpose or direction. Also, high academic procrastinators were found to have lower levels of extrinsic motivation. 2X2 ANOVA for the personality traits revealed a significant difference between high and low, academic and non-academic procrastinators on neuroticism, conscientiousness, agreeableness and extraversion with high procrastinators being more on neuroticism and agreeableness and less on extraversion and conscientiousness. However, there was no significant difference found between high and low, academic and non-academic procrastinators on openness to experience.

The result of the percentage analysis used for the investigation of reasons of procrastination specify laziness and time management to be the two most cited reasons for procrastination in academic tasks. The chi-square analysis used to find the gender differences in the reasons for procrastination revealed that high academic procrastinators-males and females do not differ in any of the thirteen reasons given for procrastination.

Key words: academic procrastination, non-academic procrastination, intrinsic motivation, extrinsic motivation, amotivation, neuroticism, conscientiousness, agreeableness, extraversion, laziness, time management.

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CHAPTER 1

INTRODUCTION

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INTRODUCTION

Delaying or postponing has become a common phenomenon. “I’ll do it later” or “I’ll think of it tomorrow”-are frequently heard statements. Most people like to delay doing unpleasant or monotonous tasks from time to time, for example, one may avoid cleaning the attic or one’s vehicles, renovating the house, cleaning the garage, or calling someone over the phone and other such tasks may be delayed due to procrastination. The extent of procrastination is vast, ranging from employees to self- employed, household to workplace, academics to non-academics etc. (Burka & Yuen, 2008). Self- employed people do not have anyone else to rely on i.e., they are themselves responsible for their business to grow- yet many still delay on tasks when they have no one to watch over. In increasingly ready for action business settings, some people deliberately slow down so that they do not have to rush with the rapid speed people usually move. Many people put things under "pending", rather than completing the necessary tasks. At home too, there are endless possibilities for procrastination such as, cleaning the cupboards, getting the house painted, paying the bills etc. Similarly, in the academic field, a student may put off doing assignments or studying for exams, because of the continuous strain of grades and other evaluations, and may then cram up when time is finally running out. Procrastination thus seems to represents an intimate part of our individual behavior and expands in almost every area or field possible.

The modern technology generation believes in putting off things on ‘never coming’ tomorrow by indulging into activities such as net surfing, social networking, games, music and videos etc. Further, the hectic schedule of modern life adds to the

prevalence of this phenomenon. Man works as a machine trying to derive maximum out of him. Since he cannot achieve everything, he has to put certain things on hold. Also, in pursuit of perfection and success, he delays certain tasks so that they can be handled later in a better way. Such circumstances are particularly relevant in a student's life. Some students worry too much about executing a particular task perfectly that they spend inordinate time in this process which eventually leads to wastage of time which could have been well utilized.

Here the question arises whether delaying behavior becomes a part of an individual's routine life because of such situations or is an innate tendency that is used in day to day routine as an escape from work. Such a situation is especially prevalent in the present day education system wherein students tend to delay academic tasks to the point of not completing it till the deadline. Therefore, the observable fact which instigated the present research was in the academic field. The current education system demands an overall development of the student. For this purpose, apart from the standard exams, a student may be evaluated on regular basis in the form of internal assessment, including seminars, projects, file work, assignments, quizzes and revision tests. Usually a student is given an adequate time span to prepare for such activities and evaluations. The foremost point to mention here is that majority of the students come on the last allotted date and the most intriguing elements in this process are the numerous and varied excuses that are repeated by students over and over again. The explanation generally involves problems that were unexpectedly encountered on the day before submission. Here the question to ponder over is "why did the students not start working on the task and submit it well before the provided deadline and what could be the

reasons for the delay?" Is it because they always procrastinate or such a delay was situational. Thus, academic procrastination became the focus of the present study.

Considering about the grounds for procrastination in the above mentioned situation there might be two alternative reasons - they always procrastinate or such a delay was situational. To elaborate on these two perspectives, it is mentioned in the first point that the student involved here would likely be in a habit of delaying each and every activity that comes his way. This indicates an enduring pattern of his behavior which might be evident by analyzing his personality characteristics. Hence, personality traits were taken as a variable to see its relationship with academic procrastination. The other perspective indicates that the student might only be procrastinating on the academic tasks and might not show such behavior in other day to day activities. This accounts for taking into consideration general procrastination habit or technically speaking, non-academic procrastination.

It might also be possible that the student was not interested to initiate the task at hand, indicating his motivation level in the academic area. Consequently, academic motivation was as an important variable contemplated to be related to delaying of academic tasks.

However, not ignoring the fact that some students managed to submit the assigned work on or before time, the inquisitive question here becomes "how". Were those students motivated enough or they do not delay any task at all irrespective of the area of field? To investigate this aspect, not only high academic and non-academic procrastinators were studied, but the behavior of low academic and non-academic procrastinators was also explored. The purpose of this research thus becomes to compare

the motivational factors and personality traits of high and low procrastinators in academic and non-academic field and analyze the reasons for lack of motivation which lead to procrastination among students.

The subsequent sections will explain the concept of procrastination in detail and its relevance in the academic field. It will also focus on the major variables to be studied in relation to academic procrastination. In the end, the chapter will point towards the objectives of the study and specify the hypothesis formulated to meet those objectives.

Procrastination

The essential feature of procrastination is postponing, delaying or putting off an activity or a making a choice. The dictionary meaning of the verb "procrastinate" is "to postpone, put off, defer, prolong." The word comes from two Latin words: *'pro'* meaning 'forward' and *'crastinus'* which means 'belonging to tomorrow'. Thus, procrastination means to willingly postpone a planned course of action even though we expect the delay to be harmful. Procrastinators tend to hold up a task until the day after tomorrow what they recognize should have been done the day before yesterday.

The dictionary meaning of the word procrastination is “defer action, especially without good reason”. Solomon and Rothblum (1984) defined procrastination from a psychological viewpoint as "the act of needlessly delaying tasks to the point of experiencing subjective discomfort". Later Milgram (1993) explained the concept of procrastination in detail indicating that “it is primarily: 1) a behavior sequence of postponement; 2) resulting in a substandard behavioral product; 3) involving a task that is perceived by the procrastinator as being important to perform; and 4) resulting in a state of emotional upset.”

As the above definitions indicate, procrastination is considered as a negative characteristic leading to adverse consequences. It is primarily considered as a failure to regulate behavior and it has been shown that constant procrastinator shows difficulty in exercising self-discipline and thus gives into impulsive behaviors instead of starting or maintaining work on given tasks (Heward & Pychyl, 2011). But it is not always the case. Several writers have mentioned procrastination as a practical delay or as avoiding hurry. Thus, it is also deduced as a clever path of (in)action which includes avoiding unnecessary work or demonstrating patience. For example, the Egyptian reference to procrastination denoted the positive habit of avoiding redundant work and impulsive effort, thus preserve energy. Lately, the positive effects of 'active' procrastination have been demonstrated by Chu and Choi (2005). According to their research, 'active' procrastinators choose to work in pressure and they make a purposeful choice to delay. Although active procrastinators delay almost same amount as passive procrastinators, but are more similar to people who do not procrastinate in terms of using their time, organize time, self-efficacy belief, coping styles, and effect such as educational performance. Thus at times, people deliberately choose to put off something because it is low on their priority list or because they want to concentrate before making a decision or taking action. They use procrastination so that they can reflect, simplify the alternatives, or attend to what seems significant at that point.

The reference of procrastination as positive (in) action is similar to the concept of *incubation*- giving time to oneself for preparing to work. But an important distinction needs to be made between procrastination and incubation. Delaying the initiation of a

task because of lack of resources or unreadiness in the mental framework of an individual indicates the incubation process and not procrastination. But eventually, if this process is extended to laziness, it indicates procrastination. Similarly, procrastination has to be differentiated from writer's block- a situation, mostly related to writing as an occupation, in which a writer is unable to generate new work. The intensity of writer's block may be minor, a momentary trouble in dealing with the task assigned. At the other extreme, one may be unable to work for years. There is also a difference between procrastination and simple decision avoidance. The latter involves people's actual intention to postpone whereas procrastination is voluntarily delaying with no reason.

Thus whether procrastination leads to unpleasantness or it is a deliberate effort for a preparation or giving time to oneself, it is extremely prevalent in the general population and is a widespread phenomenon covering almost all areas of our life. According to Piers Steel (2007), "In 1978, only about 5% of the American public thought of themselves as chronic procrastinators which have now increased to 26%." The probable reason for this increase is that now there are many options available like — televisions in every room of the house, online videos, searching the net, using mobiles, video games, and iPods which can be perceived as important. At work too, procrastination seems effortless through the use of e-mail, the Internet or games. Moreover, such activities are subjectively considered more entertaining and are instantly satisfying as compared to more long-term rewarding tasks which are thus delayed. As Noran (2000) maintains "the procrastinator will work on less important obligation, rather than fulfilling the more important obligation or (s) he may use his or her time wastefully in some minor activities or pleasure."

In this technologically advanced society where time and regularity are considered key principles, a weighty cost is carried by those who procrastinate. the effect might be observed in one's educational setting, workplace, home environment or even in relationships. Most of the people assume that the cause of procrastination is laziness but this can have various forms such as procrastination in taking decision with definite time for decision or task aversion and increasing stress (Milgram & Tenne, 2000). Procrastination is avoiding the duties and not doing a task by ignoring it (Zimberoff & Hartman, 2001). It has also been reported that time management has been inversely related to procrastinatory behavior (Lay & Schouwenburg, 1993). As procrastination leads to an extreme difference between work intention and work actions and procrastinators tend to have a bigger that the normal intention-action gap (Steel, Brothen & Wambach, 2001), therefore they suffer psychological stress when they make an effort to meet the approaching deadline and may thus suffer the pain of failure and disapproval for not being able to meet the deadlines. Thus, procrastination has been considered a specific attribute consisting of cognitive, motivation and behavior components. However, the phenomenon to be researched is that what are the factors that make a person engage in procrastination and what are the reasons to avoid the blame for the delay and hence justify the act.

Academic procrastination

Today, procrastination has become more prevalent among students than before because technology has given them the platform to explore virtual global world where they have many tasks to do in a restricted time span. Therefore, the present study will focus on the procrastination in the academic field where under the regular stress of

marks and constant assessments, a student delays working on assignments and preparing for exams, just to cram up things when the allotted time is finally about to come to an end. Academic procrastination includes delaying of academic tasks such as submitting assignments, making projects, depositing fee etc. Such activities are postponed till the deadline approaches. Solomon and Rothblum (1984) have described academic procrastination as "postponing primary academic tasks such as preparing for exams, preparing term papers, administrative affairs related to school, and duty of attendance." According to Yong (2010), "academic procrastination is an irrational tendency to delay at the beginning or completion of an academic task. Many students intend to complete their academic tasks within the time frame, but they lack the motivation to get started."

Academic procrastination is considered as a pervasive trait that can have mostly grave outcomes for students, who are encountered by recurrent deadlines. Due to their constant delaying behavior, academic procrastinators may have certain negative effects, such as low self-esteem, hopelessness, and educational failure. Ellis and Knaus (2002) regard procrastination as an "interactive dysfunctional and behavior avoidance process, characterized by the desire to avoid an activity, the promise to get to it later, and the use of excuse making to justify the delay and avoid blame." It may often be reinforced by achievement after last minute preparations, which leads to believe in this approach as a practical technique. Ferrari (1991, 1992, 2001) maintained that academic procrastinators are unable to achieve educational ambitions due to avoidance of the task at hand and fear of failure. Research has consistently demonstrated that procrastination is one of the leading hindrances to academic performance of the students at various educational levels.

Such behavior has been reported to be negatively related to test performance (Moon & Illingworth, 2005). Thus a student's academic performance has inverse relationship with procrastination (Popoola, 2005) and leads to lower grades in performances with deadlines (Tuckman, 2002).

Researchers have tried to explore a number of factors that seem to contribute to procrastination habit in students- their motivation level, interest in studies, attitude towards education, personality traits, study habits, home environment etc. For the present research purposes, academic motivational factors and personality traits have been described in the following sections.

Motivation

Motivation is a psychological attribute that stimulates an individual to proceed towards a specific goal and elicits, controls, and helps to maintain some goal directed activities. It is considered as a driving power; a psychological force that coerce or reinforce an act towards a desired goal.

Motivation is of particular interest to educational psychologists because of the important position it holds in student's academic knowledge. Academic motivation is a student's willingness about various academic areas which might be evident from his approach, persistence, and level of interest, when the student's aptitude is evaluated against a standard of performance or merit (McClelland, 1961).

The notion of motivation has been explored from numerous viewpoints. One point of view proposes that behavior is intrinsically or extrinsically motivated (Deci, 1971). Intrinsically motivated actions are those that are completed for their own sake, in other words, for the contentment and happiness which it results in. On the other hand, extrinsic

motivation pertains to actions that are accomplished as a means to an end and not for the pleasure they give. Deci and Ryan (1985) claim that besides intrinsic and extrinsic motivation, there is a third notion of motivation know as amotivation. Individuals who have amotivation do not form a link between their behavior and outcomes. They feel incompetent and lack control. Amotivated. They are so as to say, non-motivated.

For assessing a student's academic motivation style in the present study, Intrinsic Motivation, Extrinsic Motivation, and Amotivation scores were measured.

Personality

Personality is an overall combination of an individual's physical, social, intellectual, and emotional, composition. It is usually expressed in terms of how a person behaves, his experiences, values, beliefs, aspirations, attitudes, interests, habits, traits etc. A classic definition of personality has been given by Gordon Allport (1937), "Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment."

Personality has been examined from different dimensions. These include the psychoanalytic perspective, behaviorist perspective, humanistic perspective and the trait theories. One of the recent trait theories to be referred here is by McCrae and Costa (1996). They formulated five dimensions of personality known as the Big Five personality traits. The theory based on the Big Five factors is called the Five Factor Model (FFM). The Big Five factors are: openness to experience, including inventive or curious behavior vs. consistent or cautious behavior, conscientiousness including efficient or organized behavior vs. easy-going or careless attitude, extraversion including outgoing or energetic behavior vs. solitary or reserved attitude, agreeableness including

friendly or compassionate behavior vs. cold or unkind attitude and neuroticism including sensitive or nervous behavior vs. secure or confident attitude. These five factors of personality were measured for the current study.

Taking into consideration the above mentioned variables, the following objectives therefore become the focus of the present research.

Objectives

1. To compare high and low procrastinators on academic and non-academic tasks.
2. To compare the motivational factors in academic and non-academic procrastinators.
3. To compare the personality traits of academic and non-academic procrastinators.
4. To analyze the reasons for lack of motivation that leads to procrastination.

In order to achieve the specified objectives and delineate a clear relationship of academic and non-academic procrastination with motivational factors and personality traits, the following hypotheses have been formulated.

Hypotheses

H_1: There will be a significant difference in high academic and low academic procrastinators on non-academic procrastination level.

H_2: High procrastinators (academic) will be high on extrinsic motivation as compared to low procrastinators (academic).

H_3: High procrastinators (non-academic) will be high on extrinsic motivation as compared to low procrastinators (non-academic).

H_4: Low procrastinators (academic) will be high on intrinsic motivation as compared to high procrastinators (academic).

H_5: Low procrastinators (non-academic) will be high on intrinsic motivation as compared to high procrastinators (non-academic).

H_6: High procrastinators (academic and non-academic) will be high on amotivation as compared to low procrastinators (academic and non-academic).

H_7: High procrastinators (academic and non-academic) will be high on neuroticism as compared to low procrastinators.

H_8: High procrastinators (academic and non-academic) will be low on conscientiousness as compared to low procrastinators.

H_9: High procrastinators (academic and non-academic) will be high on extraversion as compared to low procrastinators.

H_{10}: There will be no difference in high and low procrastinators on openness to experience.

H_{11}: There will be no difference in high and low procrastinators on agreeableness.

H_{12}: There will be no gender difference in the reasons for academic procrastination.

The next chapter will delineate the relationship of academic procrastination with different variables by referring to previous researches and theories.

CHAPTER 2

LITERATURE REVIEW

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LITERATURE REVIEW

It has been shown that chronic procrastinators while working under pressure are not able to regulate their speed, performance, and accuracy (Ferrari, 2001) and such behavior disrupts everyday functioning. Thus, the search for individual and external factors that may contribute to the delaying behavior has been the focus of recent research. The purpose of the present research is multilayered as to study the personality traits and motivation style of high and low, academic and non-academic procrastinators and identify what mainly contributes to student's postponement habits. The present chapter thereby, would lay down the researches on academic procrastination by taking into account the history of procrastination, the specific relevance of procrastination in the academic field and the relationship of academic procrastination with academic motivation, personality traits, task characteristics and cognitive variables. The concluding part of the chapter will discuss the opposing findings related to gender differences in the prevalence and reasons for academic procrastination.

History of Procrastination

The first instance of procrastination in the history was written by Noach Milgram (1992) - Procrastination: A Malady of Modern Times. He stated that today's technically complex social order require several obligations and targets, which may lead to procrastination. Also Ferrari, Johnson and McCown (1995) put forward that procrastination has its existence all through the history but with the beginning of the industrial revolution in 1750 it started to acquire negative implication.

In the Indian context, the Bhagavata Gita, written in about 500 B.C. also holds a reference of procrastination. Within it, Lord Krishna described procrastination as one of the traits in the *Taamasika* agent- "disorderly, offensive, stubborn, evil, cruel, lethargic, disheartened and procrastinating"; and the belief was that such people are very low that human rebirth can't be given to them and so they are sent to hell. Thus, according to this perspective, postponement was considered a sin.

Hence, as reported, the chronological orientation indicates that the analysis of procrastination has been reasonably stable over the times. Though traditionally viewed as negative because of the quality of work that it produced, there have been other instances wherein procrastination has been taken on a positive note. The reason for a positive connotation of procrastination has been the inspired works of several famous procrastinators which were best created after occasionally procrastinating. The first to be mentioned is Leonardo da Vinci who had exceptionally diverse talents. He explored many areas, made noteworthy contributions, painted, sculpted and was able to prepare for machines that were too ahead of his time. But he never finished any project on time. The famous Mona Lisa for instance, took 20 years to be completed.

Another famous procrastinator is the 18th century poet Samuel Taylor Coleridge whose most of the works was left in fragments. The famous poem Kubla Khan was never actually finished. The list also includes names such as Douglas Adams, the professional writer who had always put off writing; Neville Chamberlain who irrationally put off war with Germany; Agatha Christie, the best mystery author who procrastinated before producing all of her 94 novels and John Huston, the director who finished editing African Queen only days before its release. Thus, as is seen procrastination has led to some of the

great works in art and literature, but afterwards it has also inculcated feelings of guilt and regret because at some point in life these procrastinators realized that they would have done much more if they had not procrastinated. There are many other references in the history which include the names of procrastinators who would have done wonders.

In the present times, however, the prevalence of procrastination is increasing manifold with its negative effects such as regret, guilt, disappointment with oneself etc. It is especially true in the academic field as student's academic work has been reported to have an inverse correlation with procrastination (Popoola, 2005). Thus, it is associated with, lower self-esteem, self-efficacy and resourcefulness', higher stress levels and self-consciousness, self-handicapping, self-disintegration and depression (Flett, Blankestein, & Martin 1995).

Academic Procrastination

Academic procrastination was defined by Rothblum, Solomon and Murakami (1986) as "the tendency to (a) always or nearly always put off academic tasks and (b) always or nearly always experience problematic anxiety associated with this procrastination." It has been reported by Bergman (2003) that people procrastinate because they do not like academic work as such tasks have long-term rewards than activities during procrastination. And it is a fact that human beings have been evolutionary predisposed to follow up on activities which have more immediate and short-term rewards. So a person chooses tasks that are immediately gratifying while ignoring the ones which actually need immediate attention. Piers Steel has extensively studied academic procrastination. He implicated that procrastination could be predicted with variables such as task delay and its aversiveness, self-efficacy, recklessness and

conscientiousness with its components like self-control, distractibility, organization and achievement motivation (Steel, 2007). Analyzing the roots of procrastination, Noran (2000) discovered many causes for procrastination. He classifies them in the following potential explanations:

1. Management of Time- Procrastinators seem unable to manage time sensibly. It means they have ambiguity of priorities, purpose and intentions. They also experience an overpowering feeling of doing a particular task. Consequently, he/ she delays doing an academic task for a certain period of time, at the same time focusing on fruitless doings.
2. A second reason for procrastination is the inability to focus on or being low on conscientiousness for ones work - This discrepancy might be due to disturbance from the environment, such as noise, untidy study place or trying to do some work in an uncomfortable or bothering position.
3. Another reason for procrastination lies in the fear and apprehension associated with failure. A person with such a reason would waste enormous time worrying about approaching exams or assignments and not plan for it or complete them.
4. Negative belief about one's potential is another reason for procrastination.
5. Idealistic expectation and perfectionist values that some people possess may also be a reason that causes procrastination.

Tuckman's (1990) summarized his research finding on sources of procrastination as: "disbelieving in one's own capability to perform a task; being unable to postpone gratification, and assigning blame to external sources''.

Nearly all students procrastinate on various academic tasks to some extent and many of them have reported that they have repeatedly delayed to a level which has caused them considerable stress or lower their educational performance (Solomon & Rothblum, 1984). In particular, it was shown in a 1992 study that 52% of the examined students indicated having a moderate to high requirement of assistance relating to procrastination. Also, Ellis and Knaus (1977) estimated that in America, 95% of the college students indulge in procrastination acts. In 2007, approximately 75% of the students reported to procrastinate, with 50% of them consistently considering it a problem (Burka & Yuen, 2008). Evidence also indicates that procrastination leads to negative academic performance and examination marks (Onji, 2013), and also lower grades and leaving the course (Semb, Glick & Spencer, 1979) because it does account for a considerable amount of variance in college performance (Wesley, 1994). The correlation between procrastination and academic performance was assessed in India among Dental students at the undergraduate level and it was found that students with high procrastination level achieved on a below average level in their studies (Lakshminarayan, Potdar & Reddy, 2013).

Academic Procrastination as related to Academic Motivation

As indicated by Steel (2007) achievement motivation is a strong and consistent predictor of procrastination. Also, academic procrastination is believed to be a type of circumstantial procrastination and may be portrayed as a behavior linked to a particular

activity (Harris & Sutton, 1983), probably because of the motivation behind doing a task. Thus, procrastination as a habit may be related to the motivation level of the student in academic field. Before analyzing the association between academic motivation and academic procrastination, a brief understanding of motivation as a psychological concept is laid down.

Motivation is an abstract construct used for explaining behavior. It symbolizes the rationale for people's needs, actions and wants. A motive is what activates an individual to move in a particular direction or to develop an inclination for specific behavior. For example, hunger is a motivation that activates an individual to eat or a student goes to college because he/she wants to study. Motivation plays a role in one's physiological, behavioral, cognitive, and social areas. It acts as an inner drive to perform or work in a particular way. The inner states such as goals, wishes or aspirations, activate and energize an individual to perform. The concept of motivation is used in many different disciplines to analyze the 'what and why' (Ryan & Deci, 2000) of human action. Motivation relates especially to academic settings where it can have a number of effects on students learning and their behavior towards the area of interest. It leads the behavior towards a particular goal and results in better attempt and liveliness. It can also enhance the initiation and maintenance of activities thereby improving cognitive efficiency and thus leading to better performance. The dynamic learning style of a student is very much related to his or her motivation level and researches have shown that motivation has a considerable and powerful influence on academic productivity (Vallerand & Bissonnette, 1992). In other words, a student having high motivation level may experience a better course of action in implementing tasks in the academic field.

Deci and Ryan (1985) have explained in detail the concept of academic motivation in the Self-Determination Theory. In this theory, they have differentiated between different categories of motivation based on the diverse explanation or intentions that which cause an action. Motivation is fundamentally divided into intrinsic motivation (referring to doing an act because it is essentially appealing or pleasurable) and extrinsic motivation referring to working on something because it leads to an independent product. It has been shown that the effort, experience and performance are poles apart if a person is working for intrinsic versus extrinsic motive. The observable fact is that intrinsic motivation appears to be an important aspect for educationalists because it acts as a natural source of learning and attainment but in most of the cases be damaged due to teacher and parent practices. It is particularly essential to find out the internal and external factors that stimulate versus weaken intrinsic motivation because it promotes superior learning and originality. To further clarify various varieties of intrinsic motivation, Vallerand and Bissonnette (1992) divided Deci and Ryan's combined concept of intrinsic motivation into distinct subscales of intrinsic motivation: 1) intrinsic motivation to know, 2) intrinsic motivation to accomplish, and 3) intrinsic motivation to experience stimulation.

1. Intrinsic motivation to know- It is related to the desire to work on a task for the satisfaction an individual obtains while experiencing novel things.
2. Intrinsic motivation to accomplish- It refers to the desire to work on a task for the fulfillment that an individual experiences from accomplishing or producing new ideas.

3. Intrinsic motivation to experience stimulation- It refers to the desire to work on a task to feel the sensory stimulation that comes from doing it. The stimulation may either be in intellectual or physical form.

It is a fact that students carry out extrinsically motivated acts with dislike, resistance, and lack of concern. It may also be with an attitude of willingness which may reflect a personal acceptance of the importance or value of a task. Such instances indicate towards different indicators of extrinsic motivation. For example in the first instance, a person may feel superficially forced into action whereas in the second example, the extrinsic objective is accepted with a person's own choice or decision. Thus, four types of extrinsic motivation were acknowledged. They can be laid along on a self-determination scale. These are ordered from lower to higher levels of self-determination. They are- 1) external, 2) introjected, 3) identified, and 4) integrated regulation.

1. External regulation is said to have occurred when behavior is regulated through rewards or restrictions. For example, a student participates in a task because there is an urge to do so by the teacher. In such a situation, an activity is performed to avoid negative consequences such as disapproval from the teacher. The motivation is called extrinsic because the grounds for involvement are not for the activity itself. Moreover, the behavior is not preferred or chosen by self. External regulation is usually enhanced by a desire for rewards. For example, a student may work hard in studies for a prize guaranteed by his parents. In such a situation the motivation is nonetheless extrinsic and not self-determined, but the activating cause is the expected reward rather than a restriction. Thus the individual experiences a

compulsion to act in a particular direction either to obtain rewards or to avoid sanctions. (Deci & Ryan, 1985).

2. Introjected regulation leads people to begin internalizing the causes for their behavior. Thus, the reason behind accomplishing an act is inside the individual. Nevertheless, although coming from inside the individual, internalization is not truly self-determined because it is restricted to the internalization of outer possibilities that might occur. Rewards or constraints may now be understood as forced by the individual himself and not by others. For example, a student might prepare for the exams because of the guilt feeling he has, if he doesn't. Values and constraints may be internalized, but are not self-determined. The tasks are accomplished with pressure and anxiety.
3. Identified regulation is experienced if an act is considered significant and chosen by the individual himself or herself. Here also, behavior is internally regulated but it is done in a self-determined way. For example a student may opt to do additional practice in statistics as he may believe that it will sooner or later improve his ability in the subject. The motivation is said to be extrinsic as the act is performed as a means to an end (to get better score in statistics) and not for itself. However, the behavior is nevertheless self-determined i.e. rather than being bribed into doing extra work in statistics; the student has chosen to do it because he feels that it would be beneficial for him. Such students may then experience a sense of direction and purpose, instead of obligation and pressure, in performing the behavior.

Apart from the two distinctions of motivation- intrinsic and extrinsic motivation, Deci and Ryan (1985) claimed a third construct- amotivation. Amotivated individuals perceive no relation between their behavior and results. There is an experience of incompetence and lack of control. A person high on amotivation is neither intrinsically nor extrinsically motivated but is said to be non-motivated. As there are no intrinsic or extrinsic rewards the initiation of the task ultimately ceases. Amotivated behaviors are the not at all self-determined as there is no logic of reason, no anticipation of reward and no option to change the path of experiencing. Amotivation is comparable to the concept learned helplessness (Abramson, Seligman, & Teasdale, 1978) in which a person experiences feelings of ineffectiveness and expects things to be unmanageable.

For assessing a student's academic motivation style in the present study, Intrinsic Motivation, with 3 indicators- to know, towards accomplishment and to experience stimulation, Extrinsic Motivation, with 3 indicators- identified regulation, introjected regulation, external regulation and Amotivation, were measured.

As described in the previous sections that present day education system make the students strive for multiple goals in limited time resources. Such a scenario leads to motivational conflicts as students nowadays get engaged in a number of attractive activities. A recent research by Fries et al. (2005) indicated that youngsters frequently reported conflicts between academic and leisure activities, between various educational tasks, and, even more often, between different free time fun activities. In a situation where students have to deal with a motivational inconsistency between an academic task and a relaxing activity they have two alternatives. First, they can choose the fun alternative and put off academic task (procrastination). In such a scenario, learning time

will most likely be decreased and will lead to poor academic results. On the other hand, they may choose to stick to their learning activity and do not indulge in leisure activities. Here, the students might experience motivational hindrance during the learning process. In both the cases, motivational conflicts will negatively affect academic tasks and may lead to procrastination habit in the students.

Researchers have found an inverse relationship between academic procrastination and academic motivation level in some contexts. It is to say that students who are high on academic procrastination seem to have a lower academic motivation level or student's low academic motivation level makes them delay the tasks related to their academic field. That is, tendency for procrastination increases, as motivation level decreases (Balkis, 2006; Rakes & Dunn, 2010). According to Tuckman and Sexton (1992) and Diaz-Morales et al. (2008), procrastination arises when there is a deficiency in motivation. In his another research, Tuckman (1998) asserted that it is very difficult to motivate a person who shows evidence of procrastination. But he did so by using tests as an encouragement to stimulate procrastinators to learn. The conceptualization of academic motivation being internal (intrinsic) or external (extrinsic) has been well indicated by Christopher (1998). In his research note, he postulated that students with external motivation are more likely to procrastinate as compared to intrinsically motivated students. Procrastination was also associated with poor academic performance and negative attitude of the students towards academic activities. Further, it has been shown that students who have intrinsic rationale to carry out academic work procrastinated less than those who had fewer self-governing reasons. Also, students with high amotivation or

were dependent in carrying out their academic work were liable to procrastinate more (Senecal, Koestner & Vallerand, 1995).

Similar results have been reported in a recent study by Katz et al (2013) that lack of self-directed motivation results in procrastination and to reduce procrastination, students should be encouraged to adopt an independent style of motivation. Moreover, high procrastination was associated with lack of self-determined motivation and amotivation and intrinsic motivation showed significant unique effect on procrastination (Lee, 2005). A comparison of active and passive procrastination as related to academic motivation revealed that high identification and low external regulation lead to active procrastination whereas low intrinsic and high external regulation increased the probability of passive procrastination (Seo, 2013).

Although all the above researches have stressed the relationship of intrinsic motivation and low procrastination, Reasinger and Brownlow (1996) have demonstrated that lack of extrinsic motivation can also predict procrastination. While extrinsic motivators are always present in a student's environment but these might not be as much as necessary to provide as motivating factor particularly if students are not intrinsically motivated towards their academic work. Moreover, the role of extrinsic motivators such as competition or assessment anxiety may have been minimized in the environment for procrastinators.

Thus the reviewed researches support the notion that procrastination is related to motivation and involves more than poor organization abilities or laziness as a characteristic. However, in opposition to the present view, a study by Sirin (2011) indicates that there is no significant relationship between academic motivation and

procrastination. The reason for this contradictory finding is cited to be the situational factors specific to Turkey culture such as its economic and educational policies which might have led to the sample to experience lack of motivation and concentration on their academic tasks. The reason could also be attributed to some personality traits that might have promoted procrastination in that particular group. Such kinds of researches compel us to think whether motivation is related or is not related to academic procrastination. It is to say that, in addition to the motivational factors there may be some other dimensions like personality traits or characteristics of an individual that are responsible for the delaying habit. Thus, in the next section, personality as a psychological term will first be discussed in detail and then the relationship between procrastination and personality will be elaborated.

Academic Procrastination as related to Personality

Personality, although a very commonly used term in all fields, indicates a much broader concept considering it in psychological terms. It comprises of an integration of physical, emotional, social, and intellectual composition of an individual which is expressed in behavior, experiences, outlook, values, beliefs, aspirations, interests, habits, nature and qualities. A traditional description of personality has been given by Gordon Allport (1937), "Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment." In a more recent definition by Ciccarelli and Meyer (2007) "Personality is an individual's unique and relatively stable patterns of behavior, thoughts and emotions."

Personality has been studied in a number of different ways and various psychologists have postulated personality theories by focusing on four different perspectives or viewpoints:

1. The psychoanalytic perspective propagated by Sigmund Freud emphasizes the role of unconscious processes in the development of personality.
2. The behaviorist perspective is based on the theories of learning and the effect of environment on behavior.
3. The humanistic perspective emphasizes the role of an individual's conscious life experience and choices in the development of personality.
4. The trait theories describe the attributes that build up an individual's personality and such characteristics help to predict future behavior.

A trait is a constant, stable way in which a person thinks, feels or behaves. One of the first attempts to identify key human traits was by Gordon Allport (Allport & Odbert, 1936). In one of his projects he consulted the dictionary and found out all the terms that could be used to describe a person. Further, he constructed a list of 4500 words which were trait names. He categorized these traits into three levels:

1. Cardinal trait - This trait governs and directs a person's behavior. These include the dominating passions or obsessions, such as a need for achievement, money etc.
2. Central trait - This are general characteristics found in every person but the extent varies. These are the basic building blocks that shape most of our behavior although they are not as overwhelming as cardinal traits. An example of a central trait would be honesty.

3. Secondary trait - These are the traits observed in few circumstances only. These are a person's likes or dislikes that everyone may not be aware of. However, they must be incorporated to present a comprehensive image of human personality.

Another trait approach was postulated by Raymond Cattell (1990). He devised a complex technique to categorize personality traits and identified two types of traits: source and surface traits.

1. Source traits stress the specific idea that the variations of its values are chosen by an individual unitary foundation or influence. Such traits are connected to a variety of behaviors which have a similar orientation. An example of source traits is- emotionality. It is a personality source trait that may be portrayed in behaviors like composure, excitability, and nervousness.
2. Surface traits are indispensable feelings, thoughts, or actions that may be expressed in various situations. An example of a surface trait would be expressions such as "I enjoy music" and "I love to go shopping".

Cattell decreased the number of fundamental personality traits to 171 in number by eliminating rare traits and joining common attributes. He then rated a large sample of individuals for these 171 different traits and using a statistical method known as factor analysis; he discovered closely associated items and ultimately reduced the list of traits to only 16 key personality traits. According to Cattell, these 16 traits form the base of all human personality. He also constructed a well accepted personality assessment scale known as the 16-PF.

. McCrae and Costa (1996) further made an effort to reduce the number of traits to a more convenient figure. The five dimensions thus formulated by them are known as the Big Five personality traits or dimensions of personality and are used to describe human personality. The theory based on the Big Five factors is called the Five Factor Model (FFM). The Big Five factors are:

1. Openness to experience – It includes inventive or curious behavior vs. consistent or cautious attitude. People with such a trait show admiration for art and adventure, they have unusual ideas and have variety of experiences. Openness refers to the degree of intellectual inquisitiveness, originality and an inclination towards uniqueness and variety.
2. Conscientiousness – It includes efficient or organized behavior vs. easy-going or careless attitude. It consists of self-discipline, dutiful actions, and aim for achievement. An individual with such a trait demonstrates planned rather than impulsive behavior, shows organization and is dependable.
3. Extraversion – It includes outgoing or active behavior vs. solitary or reserved trait. A person with high extraversion exhibits liveliness, positive emotions, assertiveness, sociability, talkativeness, and a tendency to find stimulation in the company of others.
4. Agreeableness – It includes responsive and considerate behavior vs. cold and ruthless attitude. The person exhibits a tendency to be compassionate and accommodating rather than distrustful and hostile attitude.
5. Neuroticism – It includes sensitive and nervous behavior vs. secure and self-assured attitude. A person high on neuroticism shows a tendency to

> experience unpleasant emotions easily, such as anger, anxiety, hopelessness, or susceptibility. It refers to the degree of emotional stability and impulse control.

Personality traits play a significant role in determining the behavior of an individual particularly procrastination. Numerous studies have related these two variables viewing procrastination as a trait in itself is associated with an inclination towards engaging in lazy behavior. A research by Schouwenburg and Lay (1995) aimed to find out the basis of trait procrastination by placing it within the five-factor personality arrangement. The results reveal that trait procrastination was to a large extent linked with lack of conscientiousness on all six aspects (competence, order, dutifulness, achievement-driving, self-discipline and deliberation). According to McCown, Petzel and Rupert (1987), procrastination has a positive correlation with extraversion and extraversion has been reported to elevate academic procrastination (Simpson & Pychyl, 2009). Further, procrastination has found to be related to neuroticism, lack of conscientiousness and extraversion. Neuroticism is associated with anxiety regarding exams and lack of confidence in preparation and extraversion was associated with interference in exam studying due to pre-planned social activities and also with impulsive and unplanned study distractions; all leading to increase in procrastination (McCown & Johnson, 1991).

A structural equation modeling analysis by Lee et al. (2006) reveals that the contentiousness mediator model accounted for 24% of the variance in trait procrastination. In fact, evidence implies that procrastination and conscientiousness are features of the same concept and are highly inversely correlated (Scher & Osterman, 2002). The role of conscientiousness as causing academic procrastination has also been

emphasized by Ferrari and Pychyl (2012). As opposed to the above findings that the fundamental basis of trait procrastination is the deficit of conscientiousness (Lay, Kovacs & Danto, 1998), it has been found recently by Capan (2010) that perfectionist personality trait significantly predicts academic procrastination.

The effect of locus of control has also been studied on procrastination. The concept of locus of control was first proposed by Rotter. According to him, the individual acts in a particular manner with an anticipation from that behavior. The expectation may be internal or external. Internal locus of control refers to the tendency of the individual to perceive good or bad events affecting him as the results of his own capability, traits, and behaviors. In external locus of control the events are perceived as being caused by outer powers like fortune, fate etc. It has been revealed that students with internal locus of control start working on the assignments before time and return them more rapidly than students with external locus of control indicating that internal locus of control leads to less procrastination (Janneson & Carton, 1999). The support for this effect has been given by Rothblum, Solomon and Murakami (1986). According to their research high procrastinators attribute their good performance to external and momentary factors rather than to their own aptitude or effort whereas low procrastinators attribute accomplishments to more internal and constant factors. Similar findings have been reported by Beck et al. (2000) and Akinsola et al. (2007). Another related factor, self-efficacy denoting a person's understanding of effectiveness of a behavior in a specific condition is also linked to procrastination. It has been found that low self-efficacy is correlated with high procrastination (Ferrari, Parker & Ware, 1992; Klassen, Krawchuk & Rajani, 2008) and academic self-efficacy proved to be an important factor in

procrastination (Klassen & Kuzucu, 2009). In a study by Klassen et al. (2009) it was revealed through multi-group structural equation modeling that self- efficacy for regulating one's self had a vital multivariate relationship with procrastination.

Another dimension of personality associated with procrastination is anxiety. Some researchers studying evaluation anxiety suggested that children with high anxiety are not determined and stay away from complex tasks, showing behavioral traits like that of procrastination (Hill & Wigfield, 1984). Thus, anxiety particularly associated with exams had a comparatively higher correlation with academic postponement (Solomon & Rothblum, 1984). Also, the inclination towards putting off on writing assignments was related to general anxiety, anxiety about writing the paper leading to lower grades because of writing the paper late (Fritzsche, Young & Hickson, 2003). However, it was also found that students were less anxious about their homework than the other academic assignments (Milgram & Toubiana, 1999) because of the probable evaluation associated with assignments. Thus, evaluation anxiety has been related to procrastination and was identified as a primary factor for procrastination through factor analysis by Clark and Hill (1994). Further, test anxiety, situational anxiety and anxiety linked bodily symptoms were associated with procrastination (Rothblum, Solomon & Murakami, 1986). Procrastinators as compared to non-procrastinators claimed to have greater social anxiety and public self-consciousness (Ferrari, 1991). In a recent study by Deniz, Tras and Aydogan (2009), anxiety has been proved to be a predictive factor in procrastination. Moreover, it has been found that the postponement persists as it momentarily alleviates anxiety, causing positive frame of mind (Steel, 2007). However, emotional respite and positivity are only short-term, and few researchers have in fact found that subjects

reported depressing feelings after procrastination (Lay & Schouwenburg, 1993). As opposed to the above findings, a research by Lay and Silverman (1996) indicated that procrastination and anxiety were unrelated. Thus, while some researches link test anxiety to procrastination, some have an opposing viewpoint.

Burka and Yuen (2008) have reported that a weak self-esteem is a commonly found in procrastinators. According to their model of procrastination, low self-esteem is an essential component of procrastination. A procrastinator starts feeling incapable, bleak and unconfident. They usually do not reveal information about their skills, are unable to estimate time, tend to focus on the past disregarding their intention. In other words, procrastination seems an approach to defend a weak self-esteem. Ferrari and Emmons (1995) found that procrastinators have low self-esteem and postpone tasks as they believe that they do not have the ability for accomplishment. Beswick, Rothblum and Mann (1988) also found a relationship between low self-esteem and procrastinatory behavior. While examining the personality correlates in decisional procrastination, Effert and Ferrari (1989) found it to be related to cognitive failure (forgetfulness) speed and impatience at task deadlines, low competitiveness and low self-esteem. Another related concept is the organizational-based self-esteem referring to the extent to which an employee perceives himself as important, consequential, efficient, and usefulto his workplace. Studies show that high organizational-based self-esteem results in positive outcomes within organization but has an inverse relationship with procrastination behavior as reported by Beheshtifar and Azadi (2013). Thus, a variety of personality traits seem to contribute significantly in the delaying habit.

Looking at procrastination as a negative trait, a study by Ferrari (1991) indicates that constant procrastination seems a personality dysfunction including anxiety, avoidance and evaluation apprehension and thus, chronic procrastination is dysfunctional towards achieving life goals. Students who procrastinate suffer from higher pressure and poor health towards the semester end (Tice & Baumeister, 1997). Ferrari (1994) has also differentiated between decisional procrastination and behavioral procrastination and its relation with specific personality traits. Behavioral postponement was associated with incomplete tasks, having guilt feelings after a positive experience and a choice of handicapping conditions. Decisional procrastination was related to self-defeating behavior such as being unable to complete important work, aggravating resentment in others and rejecting determined people. Thus, according to the above given researches, procrastination is considered as a key coping style to deal with complex choices and may involve distrust about finding a reasonable answer to a problematic situation. For example, students who tend to delay the initiation of a work may be unclear about the topic to be chosen or may be not be sure about what is required.

Academic Procrastination as related to Task Characteristics

However, it should not be considered that such personality traits always lead to procrastination. There have been studies that include situational factors as well as task characteristics leading to delaying behavior. It has been found that students procrastinated more on educational work stated to be unpleasant than enjoyable (Milgram, Marshevsky & Sadeh, 1995) and tasks regarded as impositions (Milgram, Sroloff & Rosenbaum, 1988). Thus, task aversiveness has been an important factor in predicting procrastination (Ferrari, Keane, Wolfe & Beck, 1998; Onwuenbuzie & Collins, 2001) and through factor

analysis; it was identified as a primary factor for procrastination by Clark and Hill (1994). In general, procrastinators perceive the assignments aversive as they consider themselves as incapable and more obliged by others for completion of work (Lay, 1992). It has been found that tasks should be challenging yet fun to increase the likelihood of their completion (Ferrari & Scher, 2000). Effect of evaluation of the task on procrastination has been studied and a significant interaction effect has been found between appraisal threat and degree of procrastination indicating that students with high evaluation threat significantly delayed the tasks and the researchers concluded that behavioral delays can be reduced by decreasing evaluation threat (Bui, 2007). Threat of evaluation can be related to anxiety regarding academic work. As described in the previous section that students were less anxious about their homework than the other academic assignments because of the probable evaluation associated with assignments and also evaluation anxiety was identified as a primary factor for procrastination. Similar results were reported by Senecal, Lavoie and Koestner (1997) in which subjects who anticipated evaluation for performance delayed working on the tasks than the subjects who did not expect evaluation.

Procrastination was found to be present simply if the work was considered evaluative but not when the same task was tagged as being enjoyable or pleasant activity and thus it was probable to decrease task prevention for persistent procrastinators by re-labeling them as entertaining and not as threatening assessments. (Ferrari & Tice, 2000). But an important question which arises at this point is that what could be pleasant and interesting for students in specific? One task may seem interesting to some students but not to others. It is to say that all individuals are not the same in their interests and choices.

Does it become essential to make every academic task 'fun' and if yes, then does it give the assurance that the student will not procrastinate? A recent study by Ackerman and Gross (2005) focusing on the task characteristics of procrastination found less of delaying behavior on the tasks that were considered interesting, that might require the usage of a multiple skills, for which students perceived societal rules and incentive for starting on time and for which the clear instructions were provided. An important distinction was also made between academic and non-academic tasks indicating that the delaying behavior in a particular area of study was found to be somewhat correlated with procrastination with another, but not to delaying regular work of daily life (Milgram, Batori & Mowrer, 1993). Solomon and Rothblum (1984) indicate that procrastination is not exclusively an insufficiency in learning practices or organizing the time but includes a composite interaction of behavioral, cognitive and emotional elements. Thus the above studies develop an idea that there are a number of factors which influence procrastination for a particular academic task– motivation level of the subject, personality traits, situational factors, task characteristics and finally the thought process of an individual i.e. the cognitive variables.

Academic Procrastination as related to Cognitive Variables

In science, cognition is a collection of psychological practices that includes thought, memory, language usage, knowledge, analyzing, problem solving and making choices. The term is used across various fields such as psychology, philosophy, linguistics, and computer science. In psychology particularly "cognition" refers to an information processing viewpoint of a person's psychological functioning. Cognitive Psychology focuses on the idea that to be familiar with peoples decisions one

needs to recognize the inner processes going on in their brain. It factually means "knowing". In other words, psychologists in this area study cognition and it is the psychological act or process through which knowledge is gained. Cognitive psychology focuses on the manner in which humans process information- the way they deal with the incoming stimuli and how this dealing lead to responses. It indicates that the focus here is on the factors that intervene between stimulus (input) and response (output). Cognitive psychologists study inner processes including, attention, perception, language, memory and thinking.

Similarly, cognitive skill is the ability to carry out complex mental tasks of analysis, memory, understanding, and problem solving. Such abilities are the skills that are required to complete from simple to the complicated tasks. They are related with the process of how we gain knowledge, remember, solve problems, and concentrate mentally without any physical indication. A task can be divided into the various cognitive abilities or functions needed to reach the end successfully. It has been researched that the detrimental effects of procrastination vary as a function of cognitive ability (Beck, Koons & Milgram, 2000). Procrastination is found to result from cognitive misrepresentation of flawed thought process (Ellis & Knaus, 2002) and it is also related to lapses of awareness tend to be referred to in cognitive psychology as cognitive failures (Effert & Ferrari, 1989; Fabio, 2006) such as difficulty in perceiving and estimation of time (Aitken, 1982). Academic procrastinators usually make four cognitive distortions that help to retain their task avoidance. These are: overestimate time remaining to carry out the task, underestimate time needed for carrying out tasks, overestimate upcoming motivational situation, fake belief for the requirement of emotional correspondence to accomplish a

task, and conviction that doing a task without mood is sub-optional (Noran, 2000). Procrastination has also been associated with illogical thought process (Bridges & Roig, 1997) - an act or belief agreed upon through insufficient reasoning, emotional suffering, or lack of cognitive ability.

Certain mental states related to cognition such as depression have also been reported to be related to procrastination (Saddler & Sacks, 1993). Ellis and Knaus (2002) consider procrastination to be an emotional interruption resulting from illogical viewpoints such as one must work efficiently to verify one's worth. Such irrational thoughts inhibit one to start and complete work because of the reason that such work might prove their inadequacy as a person. Effert and Ferrari (1989) demonstrated that procrastinators often have perfectionist expectations and are very much aware. They exhibit unreasonable fear to achieve or fail that may lead to avoiding tasks anxiously. Procrastination has also been related to emotional intelligence which includes the understanding of and the talent of managing one's emotions as well as the capability to be self-motivated, feeling other's emotions and to be skilled socially. A negative relationship has been revealed between emotional intelligence and academic procrastination (Deniz, Tras & Aydogan, 2009). According to Heward and Pychyl (2011), the self-control part of emotional intelligence is an important predictor of academic procrastination.

The actions of students who delay their academic responsibilities may also be related to type of learning. While learning a new subject or lesson, the inner motivation and insightful learning have to be incorporated to learn the subject completely and to master the subject. Thus concern, contentment, satisfaction, and aspiration to learn more

in terms of the material learned or studied intensely will be enhanced. However, subjects that are studied or gone through on the surface are procrastinated more. Students do not enjoy doing the straightforward and effortlessly learned subjects. Therefore, students procrastinate because of impatient and repulsive emotions experienced during shallow type of learning (Orpen, 1998).

Another related variable is the learning strategies used by a procrastinator. Learning techniques are psychological activities that learners use to help themselves to learn and comprehend something novel. These are normally carried out with components of disorganization (if a systematic approach to learning has been used), deep versus surface processing (if new information is cautiously assessed and incorporated or it is merely practiced and learnt by rote) or usage of various cognitive (e.g., rehearsal and elaboration) and meta-cognitive (e.g., planning and regulating) approaches. Because learning strategies are effortful and time consuming, students who are unmotivated towards academic work may not use such strategies frequently. Indeed, it has been pointed out by Howell and Watson (2007) that procrastination is said to be inversely related with organized and closely controlled way of one's work thus resulting in greater disorganization and lesser use of learning strategies.

Also Wolters (2003) revealed that procrastination is associated with lesser use of cognitive and meta-cognitive techniques, thus indicating that procrastinators do not match with students identified as self-regulated learners. This is so because self-regulated learners own an immense deal of knowledge or skill related to various cognitive strategies and when applied appropriately, increases a students learning. Also, self-regulated learners are meta-cognitively trained i.e. they are well-informed about the

thought and learning procedures and have the techniques to observe and organize significant features of their learning habits. Finally, these students display a wide range of adaptive motivational viewpoints and approach including a great degree of self-efficacy and a bent towards higher aspirations. Collectively, this combination of attitudes, awareness, and abilities help self-regulated learners to be autonomous and thus they keenly handle their learning styles across an array of academic areas. Therefore, it was expected that self-regulated learners may not delay as compared to other students. The findings of Wolters (2003) research support the expectation that students whose behavior shows self-regulated learning take on to procrastination to a smaller degree than other students. However, non-self-regulated students exhibit lesser task determination, effort and concentration, similar to that of procrastination. Thus, it was found out that self-efficacy for self-regulated learning was significantly negatively correlated with procrastination (Tan et al. 2008).

Rationalizations are used as a cognitive supports by procrastinators when confronted with deadlines (Tuckman, Abry, & Smith; 2002). Sigall, Kruglanski, and Fyock (2000) refer to such thoughts as wishful because it permits individuals to anticipate positive conclusions resulting from a fundamentally dysfunctional behavior, such as delaying initiation on a task near the deadline. In such a situation, rationalization gives the motivation to postpone. Thus, procrastinators may justify by thinking that his working improves under anxiety and strain, to make the postponement appear logical. This view was further supported by Tuckman's (2002) research in which the results indicated that persistent procrastinators used more of rationalizations, were less prone to

self-regulate, and as a result of which got lower grades in a structured, web-based course with numerous presentations within time limit.

Procrastination and Gender

Gender seems to play a role in many psychological attributes possessed by an individual. Considering procrastination, researches have shown mixed and inconsistent results. Over a period of time it has been proved consistently that there are no differences in male and female in the delaying behavior. (Howell & Watson, 2007; Konovalova, 2007; Klassen & Kuzucu, 2009; Sirin, 2011). Even in the Asian countries such as India (Sharma & Kaur, 2011) and Pakistan (Saleem & Rafique, 2012) no gender difference in procrastination was found. However Senecal, Koestner, and Vallerand (1995) stated in their research that women have usually more intrinsic motivation and less externally regulated and amotivation in consideration with academic tasks as compared to men, therefore, males procrastinate more than females. Similarly, Klassen et al (2009), Yong (2010) and Pala, et al (2011) have demonstrated males tend to procrastinate more than females.

CHAPTER 3

METHODOLOGY

CHAPTER 3

METHODOLOGY

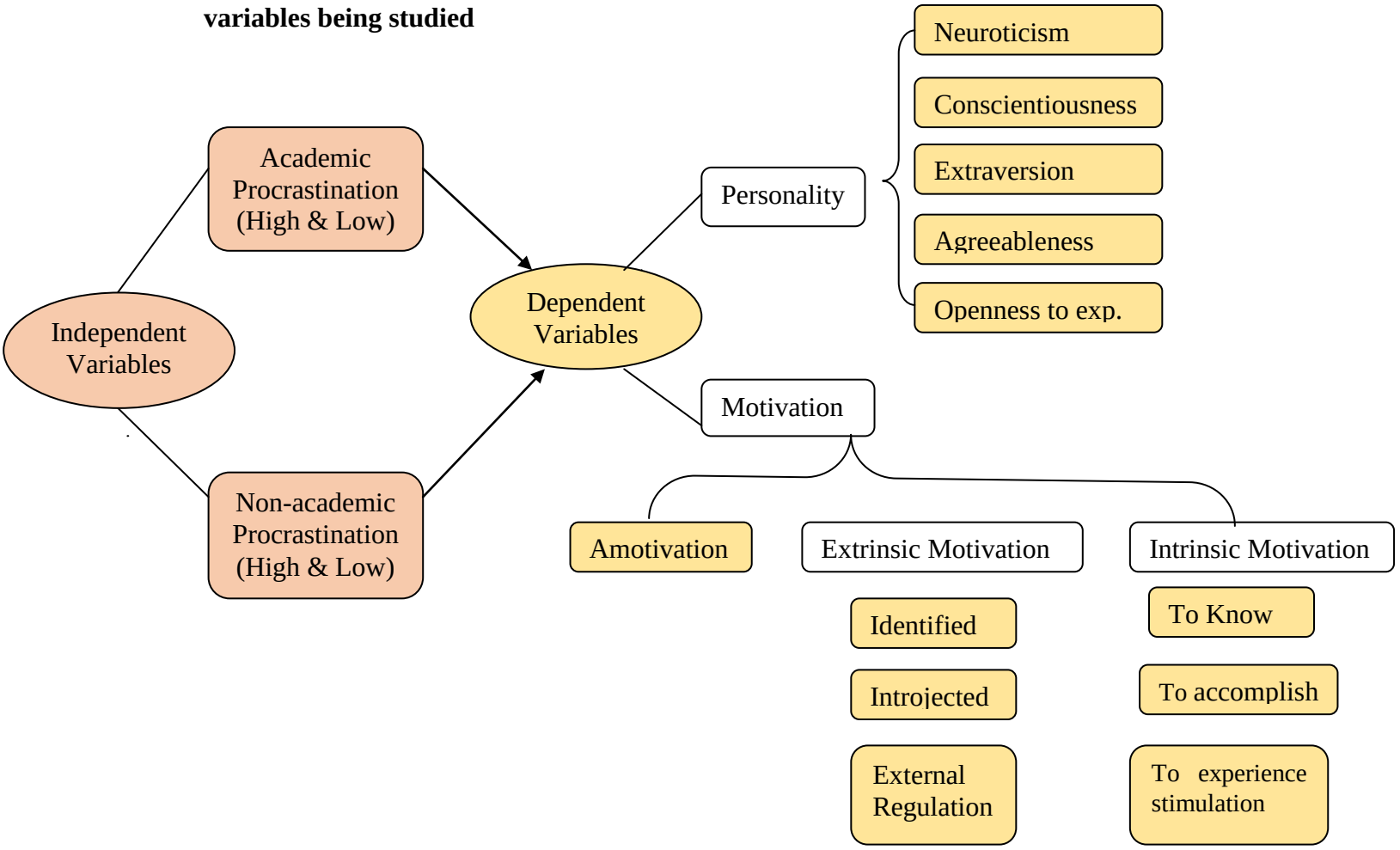
The purpose of this study is to compare motivational factors and personality traits in academic and non-academic procrastinators. An exploratory research methodology was used for this study. This chapter aims to (1) describe the design of this study, (2) explain the sample selection, (3) describe the standardized tests used for collection of data, and (4) provide an explanation of the statistical procedures used to analyze the data.

Design

The design of the present study consists of selecting high and low academic procrastinators and high and low non-academic procrastinators to compare their motivational factors and personality traits. For this purpose, academic procrastination level of 1000 students was assessed. For further testing, 300 high academic procrastinators and 300 low academic procrastinators were selected on the basis of quartile deviation. The quartiles of a ranked set of data values are the three points that split the figures into four equivalent groups, each group consisting of a quarter of the data. The first quartile (Q_1) is defined as the middle number between the smallest number and the median of the data set. The second quartile (Q_2) is the median of the data. The third quartile (Q_3) is the middle value between the median and the highest value of the data set. For the present data, values below the first quartile were taken as low academic procrastination level and the values above the third quartile were taken as high academic procrastination level. Thus, the scores of 1000 students were reduced to 600- 300 high and 300 low academic procrastinators.

The selected 300 high and 300 low academic procrastinators were further classified on the basis of their general procrastination habits to get high and low non-academic procrastinators within these two groups. The split half median method was used for the same. Thus, academic procrastination level and non-academic procrastination level were the independent variables. Subsequently, the dependent variables- academic motivation factors and personality traits- were measured considering a student's academic procrastination level (high & low) and non-academic procrastination level (high & low). Motivational factors and personality traits were then compared among academic and non-academic procrastinators.

Figure 1. **A diagrammatical representation of the relationship between variables being studied**



Sample

Sampling is a procedure to draw conclusions about significant group of respondents by studying a small sample of the total population. A sample is a section of the population selected to present the population as a whole. Ideally the sample should be representative so that the researches can make accurate estimate of the thoughts and behaviors of the large populations. According to Gay (1987), random sampling is the most excellent method to attain a representative sample. However not even random sampling, can assure a representative sample, but the possibility is higher for this process as compared to any other way. In research, a simple random sample is a subset of subjects (a sample) chosen from a large group (a population). Each person is selected at random and complete chance factor, such that every person has the same probability of being selected at any phase during the sampling procedure. For the above given reasons, the entire data was collected on the principle of simple random sampling.

Table 1

Showing the division of total sample (N=600)

Non-academic Procrastinators	Academic Procrastinators Low	High	Total
Low	144	144	288
High	156	156	312
Total	300	300	N=600

As described earlier, the purpose of the present research is to study academic and non-academic procrastinators. Therefore, subjects in the academic field i.e. students

(N=600, 457 males & 143 females) in the age group 17-19 years (*M*=18.89, *SD*=0.54) were selected as a sample for study. The total 600 subjects were categorized into academic procrastinators (high & low) and non-academic procrastinators (high & low). Table 1 illustrates the division of the total sample.

Further, although academic procrastination has been researched extensively, there still remain some areas that have not yet been touched upon. One of the research gap identifies that majority of the researches on academic procrastination has the population of students studying arts subjects especially psychology. This might have biased the results because it has been shown that personality characteristics show a discrepancy in commerce and engineering students (Nagarjuna & Mamidenna, 2008), so there might also be some differences in their delaying habit. In order to overcome this gap, students studying in undergraduate courses of technical colleges of Punjab (India) were selected for the study. Thus this research would help to explore a different dimension in the field of procrastination among students attaining technical education. In addition to this, although procrastination has been researched extensively in the United States (Ferrari & Pychyl, 2012), United Kingdom (Ferrari & Scher, 2000) and Australia (Lee, 2005) in the recent years and also in different Asian countries such as Pakistan (Hussain & Sultan, 2010), Malaysia (Yaakub, 2000), Israel (Milgram, Mey-Tal & Levison, 1998), Iran (Jadidi et al., 2011) and Singapore (Tan et al., 2008), procrastination in the Indian context has not been extensively researched and there is a need to conduct researches in India to identify additional factors specific to the Indian culture that might lead to procrastination. This study would help to achieve this goal.

All the participants studied in undergraduate courses of randomly selected six technical colleges of Punjab (India). The colleges included:

1. Chitkara University, Rajpura- Chandigarh.
2. RIMT Institute of Engineering and Technology, Mandi Gobindgarh.
3. Shaheed Udham Singh Engineering College, Tangori.
4. Thapar University, Patiala.
5. Rayat Institute of Engineering and Information Technology, Ropar.
6. University College of Engineering, Punjabi University, Patiala.

The rationale behind the research was made clear to the subjects and approval to take part in the study was acquired from all the subjects. The subjects participated for this research on a voluntarily and they were well-informed that their response would be not to be disclosed to anyone. The demographic data of the participants, which included age, gender and course studying, was gathered through the information sheet placed above the questionnaires. All the tests were given to the participants in a controlled classroom situation. All questionnaires were administered in English with no translation as English was the medium of teaching for all the above selected colleges.

Tests

(i) Procrastination Assessment Scale-Students (PASS)

PASS was used to assess student's procrastination tendency in academic tasks. It has 44-items using 5-point Likert Scale. This scale is developed by L. J. Solomon and E. D. Rothblum (1984). The scale is divided into two parts; the first part assesses the frequency of procrastination in six academic areas and the second part measures the

reasons for procrastination. The norms of the PASS were established with 323 university students. The test-retest reliability for PASS is .80. The test has very good concurrent validity, with significant correlations with Ellis Scale of Irrational Cognitions, Beck Depression Inventory, Delay Avoidance Scale and the Rosenberg Self-Esteem Scale. Significant correlation was also established between the number of self-paced quizzes and PASS scores and also between PASS scores and grade point averages (higher PASS scores with lower GPAs).

Administration

The administration of the test was done in the following way. As the word 'procrastination' is not commonly used, and the participants were explained the meaning of procrastination, "Procrastination means to put off, postpone, delay or prolong. It essentially means to willingly holdup a planned course of action in spite of expecting worse consequences." They were given proper instructions to perform the test. For the first part- Areas of Procrastination, the instructions were, "For each of the following activities, please rate the degree to which you delay or procrastinate. Rate each item on an "a" to "e" scale according to how often you wait until the last minute to do the activity. Then indicate on an "a" to "e" scale the degree to which you feel procrastination on that task is a problem. Finally, indicate on an "a" to "e" scale the degree to which you would like to decrease your tendency to procrastinate on each task." For the second part- Reasons for Procrastination, the instructions were, "Think of the last time the following situation occurred. It's near the end of the semester. The term paper you were assigned at the beginning of the semester is due very soon. You have not begun work on this paper. There are reasons why you have been procrastinating on this task. Write 'yes' or

'no' against each statement indicating whether or not it was the reason for your procrastination in this situation."

Scoring

The scoring of the test was done manually. The two components of PASS were scored differently. For the first part- Areas of Procrastination, the questionnaire was scored by first assigning a numerical value to the 5-point Likert Scale for each question such that a=1, b=2, c=3, d=4, and e=5. Then the first two questions of each of the 6 procrastination areas (1+2+4+5+7+8+10+11+13+14+16+17) were summed to get a total score. However, there is a possibility that by combining the two responses (frequency of procrastination and the degree to which you feel procrastination on that task is a problem), a distortion may have been introduced. But it has been done as to follow the instructions for scoring provided with the test. A higher score indicated more self-reported procrastination. For the second part- Reasons for Procrastination, the serial number of the statements indicating the reasons selected by participants were noted down. The 26 statements were then reduced to 13 reasons (2 statements given in brackets for each reason) : perfectionism (39, 42), evaluation anxiety (19, 24), low self-esteem (26, 33), aversiveness of task (27,36), laziness (34, 43), time management (22,28), difficulty making decisions (20,31), peer pressure (37,44), dependency (21,41), lack of assertion (23,29), risk taking 30, 35), fear of success (32,40), and rebellion against control (25, 38). Further, the frequency and percentage for each reason was calculated and analyzed.

(ii) General Procrastination Scale (GPS)

GPS was used to assess student's procrastination tendency in non-academic activities. This scale is developed by C. H. Lay (1986). It contains 20 items to be answered on a 5-point Likert-type scale ranging from 1 for 'false of me' to 5 for 'true of me'. The GPS has demonstrated good internal consistency (Cronbach's alpha = 0.82; Lay, 1986) and good stability with a test-retest reliability of 0.80. The internal consistency for the current sample was very good (Cronbach's alpha = 0.90).

Administration

The instructions for the test were as follows "People may use the following statements to describe themselves. For each statement, decide whether the statement is uncharacteristic or characteristic of you using the following 5 point scale. Note that the 3 on the scale is Neutral – the statement is neither characteristic nor uncharacteristic of you. In the box to the right of each statement, fill in the number on the 5 point scale that best describes you."

Scoring

The scoring of the test was done manually. The scale includes 10 reverse-scored items. The number indicated as the response was added up and reverse number for items 3, 4, 6, 8, 11, 13, 14, 15, 18, 20 was added up. A total of all items yield a single composite score with high values indicating a higher tendency to procrastinate in non-academic areas.

(iii) Academic Motivation Scale (AMS)

AMS was used to assess student's motivation style in academic tasks. This test is developed by R. J. Vallerand and his colleagues (1992) and is based on the Self-

determination theory of Deci and Ryan (1985). AMS has 28 items grouped into 7 subscales, i.e. 4 items each, scored on a Likert scale of 1–7. The subscales are- Intrinsic Motivation to know, Intrinsic Motivation towards accomplishment, Intrinsic Motivation to experience stimulation, Extrinsic Motivation- Identified Regulation, Extrinsic Motivation- Introjected Regulation, Extrinsic Motivation- External Regulation and Amotivation (Vallerand et al., 1992). There exists good evidence for the validity and reliability of the above mentioned construct of motivation as measured by the AMS. The internal consistency (mean alpha value = .81) and temporal stability over a one-month period (mean test-retest correlation = .79). The results of a confirmatory factor analysis confirmed the seven-factor structure of the AMS and thus provided support for the factorial validity of the scale. Results also provided construct validity evidence in the form of both a well-fitting seven-factor model and adequate internal consistency of the item responses representing each of the subscales. Convergent and discriminant validity evidence as represented by correlations with additional known measures of motivation provided further insight into the distinctiveness of the seven subscales.

Administration

The instructions for the test were as follows "Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college."

Scoring

For the scoring, done manually, an average of the total scores on each subscale is taken as the score for that particular subscale with high values indicating a higher level of academic motivation for that particular style.

(iv) Big Five Inventory (BFI)

BFI was used to measure the personality traits of the students. It is developed by Oliver P. John and S. Srivastava (1999). It consists of 44 short phrases with relatively accessible vocabulary to be scored on 5-point Likert scale. It measures an individual on the Big Five Factors (dimensions) of personality- Extraversion, Conscientiousness, Agreeableness, Openness to Experience, and Neuroticism. Each of the factors is then further divided into personality facets. The BFI has a reliability score of 0.83 and a validity coefficient of 0.92.

Administration

The participants were given the following instructions to respond on the BFI, "Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement."

Scoring

The scoring of the test was done manually. The scale includes certain reverse-scored items, and the others to be scored as the number assigned by the respondents. It yields total five scores indicating the degree of each of the Big Five Factors of personality.

Statistical analysis

The data obtained, by the use of tests described in the preceding section, was on the Likert scale. The salient feature of Likert measurement is that numerically equal distances on the scale indicate equal amount of degree in the magnitude of the variable

being measured. The permissible statistics thus used were mean, standard deviation, t-test and F-test. Mean, a measure of central tendency and standard deviation, a measure of dispersion were used to compare the characteristics of high and low, academic and non-academic procrastinators. In order to test the significance of difference between means of academic procrastination scores and non-academic (general) procrastination scores, t-test was applied. To test the difference between high and low, academic and non-academic procrastinators on the dependent variables, analysis of variation (2X2 ANOVA) was used. For using two-way ANOVA the subjects are classified according to their scores for two categorical variables. In this case, the subjects were classified into- Academic procrastinators (high and low) and non-academic procrastinators (high and low).

Then, for each of those subjects, the values of the response variables were recorded. The dependent or response variables to be considered here were academic motivation factors and personality traits.

The responses of the subjects for reasons of procrastination were in classificatory measurement (yes-no). Thus, the data being in the nominal scale, the percentage analysis was used. It is the method to represent raw data in percentage (a part in 100- percent) to comprehend the data collected. Here, a total score of the frequency of 'yes' response, for 13 reasons was calculated. The percentage was then calculated for all the participants who chose that particular reason. This indicated the most frequently given reason for academic procrastination by the selected sample.

Further, to analyze the possibility of gender difference in the reasons given for academic procrastination, chi-square test was used. The ground for using this test is that the discrete data is expressed in terms of frequencies and percentage.

CHAPTER 4

RESULTS

CHAPTER 4

RESULTS

To meet the objectives of the research, mean, standard deviation, t-test, ANOVA, percentage analysis and chi-square were used. The comparison of high and low, academic and non-academic procrastinators was done on the basis of mean and standard deviation on dependent variables. In order to test the significance of difference between means of academic procrastination scores and non-academic (general) procrastination scores, t-test was applied. Analysis of variance (2X2 ANOVA) was used to assess the motivation factors and personality traits within 2 levels of academic procrastination (high-low) and 2 levels of non-academic procrastination (high-low). For the analysis of reasons of procrastination, the percentage analysis was used. To analyze the gender difference in the reasons given for academic procrastination, chi-square test was applied. The results for the statistical analysis of the data in the present study are depicted in the Tables 2 to 42.

Table 2

Comparison of low and high academic procrastinators on General Procrastination Scale (GPS)

High procrastinators		Low procrastinators				
Mean	SD	Mean	SD	t-value	df	p
63.96	8.53	52.77	8.55	16.05	598	0.00

An independent sample t-test was applied to compare high and low procrastinators for their score on general procrastination (non-academic procrastination). Table 2 shows the mean of high procrastinators (*M*=63.96, *SD*=8.53) to be more than the mean of low procrastinators (*M*=52.77, *SD*=8.55) on general procrastination scale (GPS). A significant difference, *t* (598) =16.05 was found between mean score of high procrastinators and mean score of low procrastinators on GPS.

2X2 ANOVA was applied for two levels of academic procrastination (high/low) and two levels of non-academic procrastination (high/low) for seven dimensions of motivation: Intrinsic Motivation to know, Intrinsic Motivation towards accomplishment, Intrinsic Motivation to experience stimulation, Extrinsic Motivation-Identified Regulation, Extrinsic Motivation-Introjected Regulation, Extrinsic Motivation-External Regulation and Amotivation.

Table 3

Descriptive statistics for extrinsic motivation- identified

Non-academic Procrastinators	Academic Procrastinator Low	High
Low	N= 144 M= 21.8 SD= 4.69	N=144 M=19.92 SD=5.17
High	N=156 M= 20.6 SD= 4.56	N=156 M=19.34 SD=5.19

Table 4

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for extrinsic motivation- identified

Variables	Levels	N	M	SD
Academic Procrastination	High	300	19.63	5.16
	Low	300	21.20	4.6
Non-academic Procrastination	High	312	20.00	4.94
	Low	288	20.87	4.94

Table 3 shows the means and standard deviations for extrinsic motivation-identified. Table 4 depicts the comparisons of Means and SDs for extrinsic motivation-identified in relation to Academic and non-Academic Procrastination. As shown in the table, the mean score of high academic procrastinators (*M*=19.63, *SD*= 5.16) is less than the mean score of low academic procrastinators (*M*=21.20, *SD*=4.62) on extrinsic motivation –identified. From the mean score it can be seen that high academic procrastinators fall in the average category on extrinsic motivation –identified whereas low academic procrastinators are high on extrinsic motivation –identified. Similarly, the mean score of high non- academic procrastinators (*M*=20.00, *SD*=4.94) is less than the mean score of low non-academic procrastinators (*M*=20.87, *SD*=4.94) and both stand average on extrinsic motivation- identified.

Table 5

ANOVA Summary table for extrinsic motivation- identified

Source	SS	df	MS	F
A (Academic Procrastination)	376.33	1	376.33	15.77**
B (Non-academic Procrastination)	114.59	1	114.59	4.80*
AxB	13.19	1	13.19	0.55 ns
Within cell	14218.75	596	23.86	

**p<0.01, *p<0.05, ns=Non-Significant

The results from table 5 depict that the F-ratio between high and low academic procrastinators on Extrinsic Motivation– Identified is significant (F (1,596) =15.77, $p < 0.01$, η^2=0.025). Also, the F-ratio between high and low non-academic procrastinators on Extrinsic Motivation– Identified is significant (F (1,596) =4.80, $p< 0.05$, η^2=0.0077). The interaction AB is non-significant.

Table 6

Descriptive statistics for extrinsic motivation- introjected

Non-academic Procrastinators	Academic Procrastinators Low	High
Low	N= 144 M=16.65 SD=5.76	N=144 M=16.70 SD= 5.51
High	N=156 M= 16.13 SD=5.40	N=156 M=15.12 SD=6.25

Table 7

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for extrinsic motivation- introjected

Variables	Levels	N	M	SD
Academic Procrastination	High	300	15.91	5.90
	Low	300	16.39	5.58
Non-academic Procrastination	High	312	15.64	5.81
	Low	288	16.70	5.62

Table 6 indicates means and standard deviations for introjected extrinsic motivation. Table 7 shows high academic procrastinators have less extrinsic motivation-introjected (*M*=15.91, *SD*= 5.90), as compared to low academic procrastinators (*M*=16.39, *SD*=5.58) although both stand average on extrinsic motivation- introjected. Similarly, high non-academic procrastinators have less extrinsic motivation- introjected (*M*=15.64, *SD*=5.81), as compared to low non-academic procrastinators (*M*=16.70, *SD*=5.62) but both the groups in general are average on extrinsic motivation- introjected.

The ANOVA summary, from table 8, for the differences in high & low on academic procrastination and high & low on non-academic procrastination for extrinsic motivation– introjected depicts that high and low academic procrastinators do not differ in relation to extrinsic motivation- introjected whereas high and low non-academic procrastinators differ significantly (F (1,596) =5.18, $p< 0.05$, η^2=0.0020) in relation to extrinsic motivation- introjected. The interaction AB is non-significant.

Table 8

ANOVA Summary table for extrinsic motivation- introjected

Source	SS	df	MS	F
A (Academic Procrastination)	32.05	1	32.05	0.98 ns
B (Non-academic Procrastination)	169.41	1	169.41	5.18*
AxB	40.21	1	40.21	1.23 ns
Within cell	19491.14	596	32.70	

*p<0.05, ns=Non-Significant

Table 9

Descriptive statistics for extrinsic motivation through external regulation

Non-academic Procrastinators	Academic Procrastinators	
	Low	High
Low	N= 144 M=21.72 SD=5.50	N=144 M=20.94 SD=5.29
High	N=156 M= 20.55 SD= 5.36	N=156 M=20.72 SD=5.79

Table 10

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for extrinsic motivation through external regulation.

Variables	Levels	N	M	SD
Academic Procrastination	High	300	20.83	5.50
	Low	300	21.14	5.44
Non-academic Procrastination	High	312	20.65	5.55
	Low	288	21.35	5.36

Table 9 depicts the means and standard deviations for extrinsic motivation through external regulation. Table 10 shows the comparisons of means and SDs for extrinsic motivation through external regulation in relation to academic and non-academic procrastination. As shown in the table, high academic procrastinators have less extrinsic motivation through external regulation (*M*=20.83, *SD*=5.50), as compared to low academic procrastinators (*M*=21.14, *SD*=5.44) although both the groups are high on Extrinsic Motivation through External Regulation, in general. Similarly, high non-academic procrastinators have less Extrinsic Motivation through External Regulation (*M*=20.65, *SD*=5.55), as compared to low non-academic procrastinators (*M*=21.35, *SD*=5.36).

Table 11

ANOVA Summary table for extrinsic motivation through external regulation

Source	SS	df	MS	F
A (Academic Procrastination)	16.16	1	16.16	0.54 ns
B (Non-academic Procrastination)	74.12	1	74.12	2.49 ns
AxB	32.12	1	32.12	1.08 ns
Within cell	17770.26	596	29.82	

ns =Non-Significant

Table 11 depicts the ANOVA summary for the differences in high & low on academic procrastination and high & low on non-academic procrastination for extrinsic motivation through external regulation. The F-ratios between high and low academic procrastinators as well as between high and low non-academic procrastinators on extrinsic motivation through external regulation are not significant. The interaction AB too is non-significant.

Table 12

Descriptive statistics for intrinsic motivation to know

Non-academic Procrastinators	Academic Procrastinators Low	High
Low	N= 144 M=21.77 SD=4.95	N=144 M=19.59 SD=5.34
High	N=156 M=20.09 SD=4.99	N=156 M=18.69 SD=5.99

Table 13

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for intrinsic motivation to know

Variables	Levels	N	M	SD
Academic Procrastination	High	300	19.14	5.46
	Low	300	20.93	4.97
Non-academic Procrastination	High	312	19.41	5.31
	Low	288	20.70	5.20

Table 12 specifies the means and standard deviations for intrinsic motivation to know. Table 13 depicts the comparisons of means and SDs for intrinsic motivation to know in relation to academic and non-academic procrastination. As shown, high academic procrastinators have less intrinsic motivation to know (M=19.14, SD=5.46), as compared to low academic procrastinators (M=20.93, SD=4.97) although both are average on this aspect. Similarly, high non-academic procrastinators have less intrinsic motivation to know (M=19.41, SD=5.31), as compared to low non-academic procrastinators (M=20.70, SD=5.20) and both stand average on intrinsic motivation to know.

Table 14

ANOVA Summary table for intrinsic motivation to know

Source	SS	df	MS	F
A (Academic Procrastination)	123.07	1	123.07	4.01*
B (Non-academic Procrastination)	218.08	1	218.08	7.10**
AxB	4.35	1	4.35	0.14 ns
Within cell	18303.62	596	30.71	

**p<0.01, *p<0.05, ns=Non-Significant

Table 14 shows that high and low academic procrastinators differ significantly (F (1,596) =4.01, p< 0.05, η^2=0.0065), on intrinsic motivation to know. Also high and low non-academic procrastinators differ significantly (F (1,596) =7.10, p < 0.01, η^2=0.011), on intrinsic motivation to know. The interaction AB is non-significant.

Table 15

Descriptive statistics for intrinsic motivation to accomplish

Non-academic Procrastinators	Academic Procrastinators Low	High
Low	N= 144 M=18.45 SD=4.73	N=144 M=16.90 SD= 4.80
High	N=156 M=16.40 SD=4.19	N=156 M=15.30 SD=5.45

Table 16

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for intrinsic motivation to accomplish

Variables	Levels	N	M	SD
Academic Procrastination	High	300	16.10	5.16
	Low	300	17.41	4.46
Non-academic Procrastination	High	312	15.86	4.78
	Low	288	17.73	4.77

Table 15 shows the mean and standard deviation for intrinsic motivation to accomplish. As seen in table 16, high academic procrastinators have less of intrinsic motivation to accomplish (*M*=16.10, *SD*=5.16) as compared to low academic procrastinators (*M*= 17.41, *SD*= 4.46) although both are average on this characteristic. Similarly, non-academic procrastinators have less intrinsic motivation to accomplish (*M*=15.86, *SD*=4.78), as compared to low non-academic procrastinators (*M*=17.73, *SD*=4.77) and both are average on intrinsic motivation to accomplish.

Table 17

ANOVA Summary table for intrinsic motivation to accomplish

Source	SS	df	MS	F
A (Academic Procrastination)	260.51	1	260.51	11.62**
B (Non-academic Procrastination)	525.60	1	525.60	23.45**
AxB	7.43	1	7.43	0.33 ns
Within cell	13358.54	596	22.41	

**p<0.01, ns=Non-Significant

Table 17 shows that high and low academic procrastinators differ significantly (F (1,596) =11.62, p< 0.01, η^2=0.018), on intrinsic motivation to accomplish. Also high and low non-academic procrastinators differ significantly (F (1,596) =23.45, p< 0.01, η^2=0.037), on intrinsic motivation to accomplish. However, the interaction AB is found to be non-significant.

Table 18

Descriptive statistics for intrinsic motivation to experience stimulation

Non-academic Procrastinators	Academic Procrastinators Low	High
Low	N= 144 M= 17.67 SD= 5.40	N=144 M=16.03 SD=4.95
High	N=156 M= 15.85 SD= 4.90	N=156 M=14.67 SD=5.45

Table 19

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for intrinsic motivation to experience stimulation

Variables	Levels	N	M	SD
Academic Procrastination	High	300	15.53	5.22
	Low	300	16.76	5.15
Non-academic Procrastination	High	312	15.31	5.17
	Low	288	16.86	5.18

Table 18 shows the means and standard deviations for intrinsic motivation to experience stimulation. Table 19 depicts the comparisons of means and SDs for intrinsic motivation to experience stimulation in relation to academic and non-academic procrastination. As shown in the table, the mean score of high academic procrastinators (*M*=15.35, *SD*=5.22) is less than the mean score of low academic procrastinators (*M*=16.76, *SD*=5.15) although both are average on this particular motivation. Similarly, the mean score of high non- academic procrastinators (*M*=15.31, *SD*=5.17) is less than the mean score of low non-academic procrastinators (*M*=16.86, *SD*=5.18) although both fall in the average score on intrinsic motivation to experience stimulation.

Table 20

ANOVA summary table for intrinsic motivation to experience stimulation

Source	SS	df	MS	F
A (Academic Procrastination)	300.22	1	300.22	11.38**
B (Non-academic Procrastination)	358.29	1	358.29	13.58**
AxB	7.92	1	7.92	0.30 ns
Within cell	15723.28	596	26.38	

**p<0.01, ns=Non-Significant

As shown in table 20, the F-ratio between high and low academic procrastinators on intrinsic motivation to experience stimulation is significant (F (1, 596) =11.38, p< 0.01, η^2=0.018). Also, the F-ratio between high and low non-academic procrastinators on intrinsic motivation to experience stimulation is significant (F (1, 596) =13.58, p< 0.01, η^2=0.021). However, the interaction AB is non-significant.

Table 21

Descriptive statistics for amotivation

Non-academic Procrastinators	Academic Procrastinators Low	High
Low	N= 144 M=7.78 SD=4.99	N=144 M=10.97 SD=5.89
High	N=156 M=10.45 SD=5.57	N=156 M=10.71 SD=5.84

Table 22

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for amotivation

Variables	Levels	N	M	SD
Academic Procrastination	High	300	10.84	5.86
	Low	300	9.12	5.28
Non-academic Procrastination	High	312	10.55	5.70
	Low	288	9.36	5.51

Table 23

ANOVA summary table for amotivation

Source	SS	df	MS	F
A (Academic Procrastination)	477.45	1	477.45	15.77**
B (Non-academic Procrastination)	214.52	1	214.52	7.09**
AxB	324.24	1	324.24	10.71**
Within cell	18041.79	596	30.27	

**p<0.01

Table 21 indicates the means and standard deviations for amotivation. Table 22 shows the comparisons of means and SDs for Amotivation in relation to academic and non-academic procrastination. Figure 1 depicts the comparison of means for Amotivation in relation to academic and non-academic procrastination. As is seen in the table, high academic procrastinators have more of amotivation (*M*=10.84, *SD*=5.86), as compared to low academic procrastinators (*M*=9.12, *SD*=5.28). Similarly, high non-academic procrastinators also have more of amotivation (*M*=10.55, *SD*=5.70), as compared to low non-academic procrastinators (*M*=9.36,

SD=5.51). Table 23 shows that the F-ratio between high and low academic procrastinators on amotivation is significant (*F* (1, 596) =15.77, *p*< 0.01, η^2=0.025). Also, the F-ratio between high and low non-academic procrastinators on Amotivation is significant (*F* (1, 596) =7.09, *p*< 0.01, η^2=0.011). AB interaction is also found to be significant (*F* (1, 596) =10.71, *p*< 0.01, η^2=0.017). A simple effect analysis was carried out, the outcomes of which are presented in Table 24 and 25. The effect of academic procrastination was significant for low non-academic procrastination but not for high non-academic procrastination. Similarly the effect of non-academic procrastination was significant for only low levels of academic procrastination.

Table 24

ANOVA for simple effects of A (academic procrastination) for amotivation

Source	SS	df	MS	F
A for b1 (low)	765.14	1	765.14	25.28**
A for b2 (high)	5.08	1	5.08	0.17 ns
Within cell	18041.79	596	30.27	

**p<0.01, ns=Non-Significant

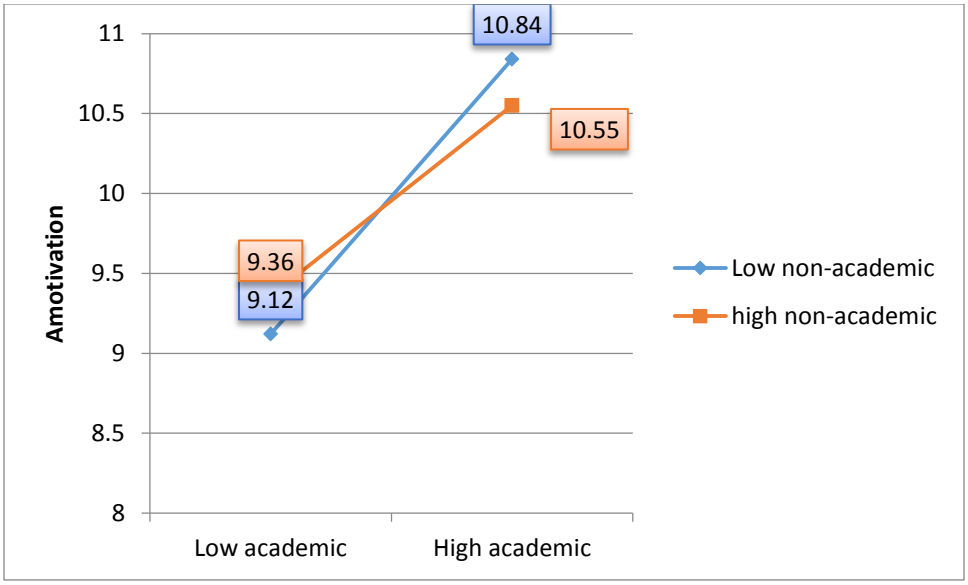
Table 25

ANOVA for simple effects of B (non-academic procrastination) for amotivation

Source	SS	df	MS	F
B for a1 (low)	536.02	1	536.02	17.71**
B for a2 (high)	5.08	1	5.08	0.17 ns
Within cell	18041.79	596	30.27	

**p<0.01, ns=Non-Significant

Figure 2 .Mean scores for academic- low & high procrastinators and non-academic- low & high procrastinators on amotivation.



2X2 ANOVA was applied for two levels of academic procrastination (high/low) and two levels of non-academic procrastination (high/low) for five dimensions of personality: Extraversion, Conscientiousness, Agreeableness, Openness to Experience, and Neuroticism. The following tables show the results for the same.

Table 26

Descriptive statistics for personality trait- neuroticism

Non-academic Procrastinators	Academic Procrastinators Low	High
Low	N= 144 M=22.88 SD=6.14	N=144 M=24.95 SD= 5.54
High	N=156 M=24.46 SD= 904.	N=156 M=26.63 SD=6.00

Table 27

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for personality trait- neuroticism

Variables	Levels	N	M	SD
Academic Procrastination	High	300	25.79	5.78
	Low	300	23.67	5.51
Non-academic Procrastination	High	312	25.51	5.54
	Low	288	23.89	5.84

Table 28

ANOVA summary table for personality trait- neuroticism

Source	SS	df	MS	F
A (Academic Procrastination)	671.85	1	671.85	21.46**
B (Non-academic Procrastination)	394.94	1	394.94	12.62**
AxB	0.35	1	0.35	0.01 ns
Within cell	18655.88	596	31.30	

**p<0.01, ns=Non-Significant

Table 26 represents the means and standard deviations for neuroticism. Table 27 depicts the comparisons of means and SDs for neuroticism in relation to academic and non-academic procrastination. As shown in the table, the mean score of high academic procrastinators (*M*=25.79, *SD*= 5.78) is more than the mean score of low academic procrastinators (*M*=23.67, *SD*=5.51) on neuroticism. Similarly, the mean score of high non- academic procrastinators (*M*=25.51, *SD*=5.54) is more than the mean score of low non-academic procrastinators (*M*=23.89, *SD*=5.84) on neuroticism. Table 28 describes the ANOVA summary for the differences in high & low on academic procrastination and high & low on non- academic procrastination for neuroticism. The F-ratio between high and low academic procrastinators on neuroticism is significant (*F* (1, 596) = 21.46, *p*< 0.01, η^2=0.034). Also, the F-ratio between high and low non-academic procrastinators on neuroticism is significant (*F* (1,596) =12.62, *p*< 0.01, η^2=0.020). AB interaction is non-significant.

Table 29

Descriptive statistics for personality trait- conscientiousness

Non-academic Procrastinators	Academic Procrastinators Low	High
Low	N= 144 M=32.76 SD=5.20	N=144 M=27.87 SD= 4.99
High	N=156 M=29.04 SD=5.34	N=156 M=25.49 SD=5.16

Table 30

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for personality trait- conscientiousness

Variables	Levels	N	M	SD
Academic Procrastination	High	300	26.68	5.07
	Low	300	30.90	5.27
Non-academic Procrastination	High	312	27.33	5.40
	Low	288	30.38	5.34

Table 31

ANOVA summary table for personality trait- conscientiousness

Source	SS	df	MS	F
A (Academic Procrastination)	2692.81	1	2692.81	110.43**
B (Non-academic Procrastination)	1391.39	1	1391.39	57.06**
AxB	68.49	1	68.49	2.81 ns
Within cell	14532.83	596	24.38	

**p<0.01, ns=Non-Significant

Table 29 depicts means and standard deviations for personality trait-conscientiousness. Table 30 shows the comparisons of Means and SDs for conscientiousness in relation to academic and non-academic procrastination. As can be seen from the table, high academic procrastinators are less on conscientiousness (*M*=26.68, *SD*=5.07) as compared to low academic procrastinators (*M*=30.90, *SD*=5.27). In the same way, high non-academic procrastinators also are less on conscientiousness (*M*=27.33, *SD*=5.40) as compared to low non-academic procrastinators (*M*=30.38, *SD*=5.34). Table 31 depicts the ANOVA summary for the differences in high & low on academic procrastination and high & low on non- academic procrastination for conscientiousness. As indicated in the table the F-ratio between high and low academic procrastinators on conscientiousness is significant (*F* (1, 596) =110.43, *p*< 0.01, η^2=0.144). Also, the F-ratio between high and low non-academic procrastinators on conscientiousness is significant (*F* (1,596) =57.06, *p*< 0.01, η^2=0.074). AB interaction is non-significant.

Table 32

Descriptive statistics for personality trait- extraversion

Non-academic Procrastinators	Academic Procrastinators Low	High
Low	N= 144 M=26.37 SD=5.46	N=144 M=25.62 SD=5.25
High	N=156 M=25.33 SD= 5.52	N=156 M=24.25 SD=6.02

Table 33

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for personality trait- extraversion

Variables	Levels	N	M	SD
Academic Procrastination	High	300	24.94	5.64
	Low	300	25.85	5.49
Non-academic Procrastination	High	312	24.81	5.74
	Low	288	26.02	5.34

Table 34

ANOVA summary table for personality trait- extraversion

Source	SS	df	MS	F
A (Academic Procrastination)	123.07	1	123.07	4.01*
B (Non-academic Procrastination)	218.08	1	218.08	7.10**
AxB	4.35	1	4.35	0.14 ns
Within cell	18303.62	596	30.71	

**p<0.01, *p<0.05, ns=Non-Significant

Table 32 indicates means and standard deviations for extraversion trait (M=26.37, SD=5.46) as compared to others. Table 33 shows the comparisons of means and SDs and for extraversion in relation to academic and non-academic procrastination. As can be seen from the table, high academic procrastinators are less on extraversion (*M*=24.94, *SD*=5.64) as compared to low academic procrastinators (*M*=25.85, *SD*=5.49). Similarly, high non-academic procrastinators are less on extraversion (*M*=24.81,

SD=5.74) as compared to low non-academic procrastinators (*M*=26.02, *SD*=5.34). Table 34 depicts the ANOVA summary for the differences in high & low on academic procrastination and high & low on non- academic procrastination for extraversion. The F-ratio between high and low academic procrastinators on extraversion is significant (*F* (1,596) =4.01, *p*< 0.05, η^2=0.0065). Also, the F-ratio between high and low non-academic procrastinators on extraversion is significant (*F* (1,596) =7.10, *p*< 0.01, η^2=0.011). AB interaction is non-significant.

Table 35

Descriptive statistics for personality trait- openness to experience

Non-academic Procrastinators	Academic Procrastinators Low	High
Low	N= 144 M=36.12 SD=5.26	N=144 M=34.94 SD=5.11
High	N=156 M=35.01 SD=5.10	N=156 M=34.85 SD=5.07

Table 36

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for personality trait- openness to experience

Variables	Levels	N	M	SD
Academic Procrastination	High	300	34.90	5.09
	Low	300	35.57	5.18
Non-academic Procrastination	High	312	34.95	5.09
	Low	288	35.55	5.19

Table 37

ANOVA summary table for personality trait- openness to experience

Source	SS	df	MS	F
A (Academic Procrastination)	72.72	1	72.72	2.76 ns
B (Non-academic Procrastination)	53.27	1	53.27	2.02 ns
AxB	38.12	1	38.12	
Within cell	15689.79	596	26.33	

ns=Non-Significant

Table 35 describes the means and standard deviations for openness to experience. Table 36 depicts the comparisons of Means and SDs for openness to experience in relation to academic and non-academic procrastination. As shown in the table, the mean score of high academic procrastinators (*M*=34.90, *SD*=5.09) is less than the mean score of low academic procrastinators (*M*=35.57, *SD*=5.18) on openness to experience. Similarly, the mean score of high non- academic procrastinators (*M*=34.95, *SD*=5.09) is less than the mean score of low non-academic procrastinators (*M*=35.55, *SD*=5.19) on openness to experience. Table 37 shows that the F-ratios between high and low academic procrastinators as well as between high and low non-academic procrastinators on openness to experience are not significant.

Table 38

Descriptive statistics for personality trait- agreeableness

Non-academic Procrastinators	Academic Procrastinators Low	High
Low	N= 144 M=34.69 SD=4.90	N=144 M=33.89 SD=5.18
High	N=156 M= 32.85 SD=4.89	N=156 M=32.80 SD=4.89

Table 39

Comparison of means and standard deviations on academic (high-low) and non-academic (high-low) procrastination for personality trait- agreeableness

Variables	Levels	N	M	SD
Academic Procrastination	High	300	33.05	5.00
	Low	300	33.77	4.91
Non-academic Procrastination	High	312	32.86	4.87
	Low	288	34.02	5.00

Table 40

ANOVA summary table for personality trait- agreeableness

Source	SS	df	MS	F
A (Academic Procrastination)	83.58	1	83.58	3.45 ns
B (Non-academic Procrastination)	202.07	1	202.07	3.85**
AxB	68.55	1	68.55	2.83 ns
Within cell	14423.11	596	24.20	

**p<0.01, ns=Non-Significant

Table 38 shows the means and standard deviations for agreeableness. Table 39 depicts the comparisons of Means and SDs for agreeableness in relation to academic and non-academic procrastination. As can be seen from the table, high academic procrastinators are less on agreeableness (M=33.05, SD=5.00) as compared to low academic procrastinators (M=33.77, SD=4.91). Further, high non-academic procrastinators are less on agreeableness (M=32.86, SD=4.87) as compared to low academic procrastinators (M=34.02, SD=5.00). Table 40 depicts the ANOVA summary for the differences in high & low on academic procrastination and high & low on non-academic procrastination for agreeableness. As seen in the table the difference between high and low academic procrastinators is found to be non-significant, whereas the F-ratio between high and low non-academic procrastinators on agreeableness is significant (F (1,596) =8.35, p< 0.01, η^2=0.013). AB interaction is however non-significant.

Table 41

Summary table for the frequency and percentage of reasons of academic procrastination in descending order.

Rank	Reasons	Responses (N=300) No	Yes	Percentage of subjects saying yes
1	Laziness	201	99	33.00
2	Time management	201	99	33.00
3	Indecisiveness	203	97	32.33
4	Peer pressure	206	94	31.33
5	Dependency	213	87	29.00
6	Task aversiveness	219	81	27.00
7	Risk taking	232	68	22.67
8	Perfectionism	232	68	22.67
9	Lack of assertiveness	234	66	22.00
10	Evaluation anxiety	237	63	21.00
11	Low self- esteem	248	52	17.33
12	Rebellion against control	257	43	14.33
13	Fear of success	279	21	7.00

The percentage analysis was used for the investigation of reasons of procrastination. Table 41 provides a summary for the frequency and percentage of reasons of academic procrastination in descending order. It shows that the major reasons for the delaying behavior for the selected group of participants are Laziness and Time Management (33% each). The least chosen reason was Fear of Success (7%).

Table 42

Showing the chi-square result of males and females in relation to reasons for academic procrastination

S.No.	Reasons	Observed Percentage		Chi-square (X2)
		Males	Females	
1	Laziness	31.3	38.8	1.315 ns
2	Time management	33.0	32.8	0.001 ns
3	Indecisiveness	31.3	35.8	0.480 n
4	Peer pressure	31.3	31.3	0.000 ns
5	Dependency	30.5	23.9	1.098 ns
6	Task aversiveness	28.3	22.4	0.931 ns
7	Risk taking	23.2	20.9	0.154 ns
8	Perfectionism	22.7	22.4	0.004 n
9	Lack of assertiveness	21.9	22.4	0.008 ns
10	Evaluation anxiety	21.0	20.9	0.001 ns
11	Low self- esteem	17.2	17.9	0.020 ns
12	Rebellion against control	15.5	10.4	1.061 ns
13	Fear of success	8.2	3.0	2.136 ns

Table 42 shows that chi-square analysis of males and females in relation to reasons for academic procrastination is not significant for any of the 13 reasons.

CHAPTER 5

DISCUSSION

CHAPTER 5

DISCUSSION

The rationale of the present research was to compare the motivational factors and personality traits of high and low procrastinators in academic and non-academic field and analyze the reasons which lead to procrastination among students. The result thus focused on the comparison of high and low procrastinators on academic and non-academic tasks, the comparison of the motivational factors in academic and non-academic procrastinators and the comparison of the personality traits of academic and non-academic procrastinators. It also aimed to analyze the reasons that lead to procrastination. This chapter covers the findings of the study in light of the previous researches and the present hypothesis formulated; conclusion of the specific data analysis and its generalization with limitations and future research orientations. The tables depicting the results of the statistical analysis in the present study have been provided in the previous chapter. The discussion of the results will be carried out in view of the objectives and the hypothesis formulated for the study.

Comparison of high and low academic procrastinators on non-academic tasks

Procrastination is usually considered a pervasive habit indicating that a high procrastinator will be delaying any activity irrespective of the area or field. Also, general procrastination was established to be an important predictor of academic procrastination (Sirin, 2011). To analyze this aspect, t-test was used to compare high and low academic procrastinators for their score on general procrastination (non-academic). The results indicate a significant difference between mean score of high procrastinators and mean score of low procrastinators on General Procrastination Scale (GPS). This indicates that

high and low academic procrastinators differ in their non-academic procrastination tendencies. The non-academic activities might include delaying general day to day activities such as mailing a letter, returning a phone call, shopping gifts or an essential item etc. It has been revealed in the present finding that students who procrastinate in their academic tasks have the habit of delaying at the general level as well. On the other hand, students who do not procrastinate in the academic field are punctual in performing daily routine activities also. Although a study by Milgram et al. (1993) showed that academic procrastination was not associated with the delaying of everyday tasks of daily life but the present research points toward a different trend. It emphasizes that procrastination is a habit because of which an individual delays performing tasks or initiation of a task irrespective of the field, academic or non-academic. Thus, the present finding puts forward the notion of procrastination as a relatively stable trait in an individual which encompasses all aspects of his behavior.

Motivational factors in academic and non-academic procrastinators

Extrinsic motivation

Extrinsic motivation fundamentally involves undertaking a task as a compulsion or in return of certain other things. It incorporates three categories- identified, introjected and external regulation. Results show that extrinsic motivation- identified, is found to be highest in students who are low on procrastination in the academic as well as non-academic fields. This indicates that students who are not in the habit of delaying tasks are motivated to do so because they believe that doing so would be beneficial to them. The motivation is though extrinsic because the work is done as a way to a goal and not merely because of personal satisfaction. Such behavior may in turn lead to a sense of purpose or

direction. Further, although the entire sample was found to be average on extrinsic motivation- introjected, the highest mean score was of the students who procrastinated in academic but not in non-academic field. It indicates that students are motivated towards particular tasks because of the pressure and tension that has been created by internalizing the value of that particular task. Similarly, extrinsic motivation through external regulation is found in students who are low on academic as well as non-academic procrastination. It indicates that their behavior is guided through external rewards or constraints which motivate them to be punctual in their academic as well as day to day activities.

The hypothesis related to extrinsic motivation was formulated on the basis of the perception that students who postpone their academic tasks would be doing them eventually because of the expected outcome because as Deci and Ryan (1985) report that students if extrinsically motivated, dislike their work and do it with resistance, and lack of concern. The hypothesis stated that high procrastinators (academic) will be high on extrinsic motivation. Going by the results it is observed that high academic procrastinators have lower levels of extrinsic motivation –identified, introjected and through external regulation than that of low academic procrastinators. This is in line with the previous researches which state that students with extrinsic motivation are more likely to procrastinate (Christopher, 1998) and thus procrastination arises from lack of motivation (Diaz-Morales et al., 2008). As pointed out earlier, identified regulation occurs when an act is perceived by the person as valuable and is preferred by one own self. Students categorized as high academic procrastinators apparently do not choose or value their academic tasks greatly thus having barely average level of extrinsic

motivation –identified. Extrinsic motivation- introjected indicates a condition where people start to internalize the basis for their acts. In the present result it is seen that high academic procrastinators do not completely internalize the motive behind their academic tasks. They do it just for external contingencies imposed by them. The type of extrinsic motivation on which academic procrastinators score high is through external regulation. This means that the academic activity or task is done with clear expectation of rewards. The motivation is extrinsic because the motive behind participation is outside the activity itself. To summarize, it can be said that the observation that students who delay their academic tasks would eventually accomplish them because of the outcome associated with it, stands true in light of the above given points. Thus, the hypothesis is accepted.

The second hypothesis of the study stated that high procrastinators (non-academic) will be extrinsically motivated. As pointed out by Rakes and Dunn (2010) procrastination level increases with decrease in motivation, the basis of the hypothesis formulated was that students who delay their non-academic activities, i.e. they are categorized as general procrastinators would be doing such day to day tasks eventually because of the expected reward. In the results, it is evident that the mean score of high non- academic procrastinators is less than the mean score of low non-academic procrastinators and both stand average on extrinsic motivation- identified. Similarly, high non-academic procrastinators have less extrinsic motivation- introjected as compared to low non-academic procrastinators. Likewise, high non-academic procrastinators have less extrinsic motivation through external regulation as compared to low non-academic procrastinators. It is clear from the results, that high non- academic procrastinators do not possess more of extrinsic motivation as compared to low non-academic procrastinators.

Instead, low non-academic procrastinators are significantly higher on extrinsic motivation- identified and extrinsic motivation- introjected. This finding stands in opposition to the hypothesis formulated as a result of which the second hypothesis has not been accepted. Such contradicting findings have been reported in the past also. Brownlow and Reasinger (1996) have demonstrated that lack of extrinsic motivation can also predict procrastination which stands true for the present finding.

Intrinsic motivation

Intrinsic motivation involves performing a task with the personal satisfaction and pleasure that the performance gives. If one is intrinsically motivated, it does not require any kind of encouragement or inspiration to initiate an activity. It just comes from within. With this notion, it was assumed that students with intrinsic motivation will not be delaying tasks. The three constructs of intrinsic motivation are- to know, to accomplish and to experience stimulation. Intrinsic motivation to know involves the curiosity motivation, i.e., to gain satisfaction from obtaining knowledge or a desire to explore because of interest and inquisitiveness. Satisfaction is also gained by achieving success in mere accomplishment of a task. This relates to effectance motivation which deals with the drive to execute a task in an effective manner which in turn gives the satisfaction of being proficient in a particular task. Stimulation and activity are essential to keep an individual's well-being. The more one stimulates oneself, the more it enhances brain functioning, which provides better chances of success, achievement and progress.

The results of the present findings indicate that students who are low on academic as well as non-academic procrastination are high on all three indicators of intrinsic motivation- to know to accomplish and to experience stimulation. The result supports the

study by Tuckman and Sexton (1992) that procrastination arises from lack of motivation. The hypothesis formulated was that low procrastinators (academic) will be high on intrinsic motivation and the results indicate a similar trend. As shown, low academic procrastinators have more of intrinsic motivation to know as compared to high academic procrastinators (and the difference is found to be significant). Similarly, low academic procrastinators have more of intrinsic motivation to accomplish as compared to high academic procrastinators and the difference between the two is significant. Likewise, the mean score of low academic procrastinators is more than the mean score of high academic procrastinators on intrinsic motivation to experience stimulation and the difference is significant. The above given results indicate low procrastinators (academic) are high on all three categories of intrinsic motivation i.e., to know, to accomplish and to experience stimulation.

As has been reported constantly in the literature review that intrinsically motivated students procrastinate less (Christopher, 1998; Katz et al., 2013), this observation has been again proved by the present findings. It is to say, that such students do not delay their academic tasks for the reason that they are inherently interested to do those activities as they expand their knowledge base through by completing various tasks and they gain satisfaction in the course of stimulation experienced. Similar results have been reported which confirm that students with intrinsic motives to accomplish academic tasks procrastinated less than those with less self-governing grounds (Senecal, Koestner & Vallerand, 1995; Lee, 2005). That is why there exists an inverse relationship between intrinsic motivation level and the tendency for procrastination (Rakes & Dunn, 2010). In

light of the above given points, the hypothesis which stated that low procrastinators (academic) will be high on intrinsic motivation, is accepted.

The next hypothesis states that low procrastinators (non-academic) will be high on intrinsic motivation. As seen in the results low non-academic procrastinators have more of intrinsic motivation to know, as compared to high non-academic procrastinator. Also the difference between the two means is found to be significant. Similarly, low non-academic procrastinators have more of intrinsic motivation to accomplish as compared to high non-academic procrastinators and the difference is significant. Likewise, the mean score of low non- academic procrastinators is found to be more than the mean score of high non-academic procrastinators and the difference between the two means is found to be significant as well. As in the case of low academic procrastinators, low non-academic procrastinators also have shown to be high on all three aspects of intrinsic motivation i.e., to know, to accomplish and to experience stimulation. Such students are not only regular in their academic tasks; they relate to factors under their own control but also do not delay their day to day activities. They perceive having the efficiency skills needed to reach the desired objective and thus accomplish their tasks with interest or enjoyment rather than be dependent on outside demands or a wish for compensation. Consequently, the hypothesis has been accepted.

Amotivation

If an individual is neither intrinsically nor extrinsically motivated, i.e. there is no motivation at all for performing a particular task, it indicates amotivation. Amotivation symbolizes lowest level of motivation which evidently decreases the chances that the individual will not be able to complete a task even if it has been started

by some means. As described earlier, individuals are amotivated if they do not perceive a congruency between their actions and results and experience lack of ability and organization. Amotivated individuals are basically non-motivated. Thus, it was presumed that amotivation will be directly related to high procrastination and was hypothesized that high procrastinators (academic and non-academic) will be high on amotivation. The results indicate that students who are high on academic procrastination and low on non-academic procrastination are the ones who are highly amotivated. Further, it was found that high academic procrastinators have more of amotivation as compared to low academic procrastinators. Similarly, high non-academic procrastinators also have more of amotivation as compared to low non-academic procrastinators and the difference is significant. It is thus found that in both the areas i.e., academic and non-academic, amotivation results in high procrastination. It is due to the fact that as there is no reward (intrinsic or extrinsic), the initiation of the task will be delayed and involvement in the task will ultimately come to an end. With no intention and no anticipation of reward, motivation level evidently decreases and it has been shown that as the motivation level reduces, inclination for procrastination is enhanced (Balkis, 2006). Thus, the hypothesis stands true in the light of the present results.

Summarizing the findings related to motivational factors in academic and non-academic procrastinators, it can be said that procrastination is related to lack of several constructs such as exploration, curiosity and satisfaction experienced while learning. Thus, students with low intrinsic motivation and high amotivation delay tasks because they do not possess intrinsic intellectuality and innate psychological need for competence. If they would have been intrinsically motivated, there would have been no

delay in the initiation of a task because of the sheer pleasure derived from participation. Furthermore, students who are low on procrastination indulge in a task for the enjoyment and contentment experienced when they try to achieve or produce something. Such students focus on the course of attaining rather than on the end result. The fact that high procrastinators delay the task at hand and engage themselves in other activities explains that they are not motivated enough for the academic tasks. On the other hand, students low on procrastination go for academic work for experiencing pleasure of an interesting group discussion , or read something for the extreme feeling of cognitive contentment derived from passionate and stimulating text and thus are intrinsically motivated to experience stimulation in academic setting which eventually results in low procrastination and good academic performance.

Personality traits in academic and non-academic procrastinators

Procrastination as a habit becomes a consistent part in the behavior of people who then constantly delay all activities. It develops into a characteristic which can be seen overtly in high procrastinators. Thus procrastination, as related to personality traits, was considered to be of different intensity in high and low procrastinators. The seventh hypothesis of the present research was related to personality traits and stated that high procrastinators will be high on neuroticism as it was found to be positively related with procrastination (Fabio, 2006). Neuroticism refers to a personality trait which indicates the amount of emotional constancy and control of impulse. It was thus assumed that students high on procrastination will have neuroticism as a trait in their personality because the delaying habit could be attributed to unpleasant emotions such as nervousness,

hopelessness, or weakness sensed before initiating an activity in people who are high on neuroticism.

The present findings indicate that neuroticism is found to be maximum in students who are high both on academic as well as non-academic activities. Considering the comparison, the mean scores of high academic procrastinators as well as of high non-academic procrastinators are significantly more than the mean scores of low academic procrastinators and low non-academic procrastinators. This indicates that students who are high on procrastination possess more of neuroticism. The difference found between the two groups is also found to be significant indicating that high procrastinators (academic as well as non-academic) show more of anxiety or emotional instability. Consequently, the hypothesis stands true in light of the present findings. This is in line with the previous research in which indicates that neuroticism is linked with apprehension related to examinations because of which a student is unable to prepare efficiently leading to more of procrastination (McCown & Johnson, 1991).

Conscientiousness as a personality trait refers to an inclination towards self-control, dutiful attitude, and an aspiration to achieve. People high on conscientiousness show signs of pre-planned behavior rather than acting spontaneously. They are organized, and dependable. All the characteristics mentioned above are contrary to how procrastinators behave and thus procrastination has an inverse relationship with conscientiousness (Fabio, 2006). Evidently, people who are high on conscientiousness would perform their tasks without delay thus leading to low procrastination. It has been reported that conscientiousness and organization as a component of perfection are negatively associated with procrastination (Jadidi et al., 2011). The hypothesis hence

formulated states that high procrastinators (academic and non-academic) will be low on conscientiousness. Considering the result of the present study it is clear that the mean scores of high academic procrastinators as well as of high non-academic procrastinators is significantly less than the mean scores of low academic procrastinators and low non-academic procrastinators. This indicates that high procrastinators (academic as well as non-academic) are low on conscientiousness. Thus, the hypothesis is accepted.

The finding of the present study is in agreement with prior researches. As previously reported, Schouwenburg and Lay (1995) revealed that procrastination was for the most part related to lesser of conscientiousness trait. In fact, there has been evidence suggesting that procrastination and conscientiousness are components of the same conception and are highly inversely related to each other (Scher & Osterman, 2002). Although all these researches have not been done in India, but the present study which is done on Indian engineering students reveal the same results pointing to the fact that the most important basis of procrastination lies in lacking conscientiousness (Lay, Kovacs & Danto, 1998) and this stands true across all cultures.

The next personality trait to be studied was extraversion which refers to friendliness and the inclination to search for inspiration in others company. As extroverts are expected to be constantly busy in social interactions, they are assumed to delay the initiation of tasks by the virtue of being preoccupied in other activities. It has also been stated in the literature review that extraversion has been reported to elevate academic procrastination (Simpson & Pychyl, 2009). Thus it was hypothesized that high procrastinators (academic and non-academic) will be high on extraversion as compared to low procrastinators. However, as we look at the present results, the finding seems

contradictory. The results show that high academic procrastinators have significantly less of extraversion as compared to low academic procrastinators and similarly high non-academic procrastinators have less of extraversion as compared to low non-academic procrastinators. Thus, contrary to the previous researches which show that procrastinators are high on extraversion (McCown, Petzel & Rupert, 1987), the present findings negate that high procrastinators have more of extraversion trait. The reason for this may be the fact that, as mentioned in the methodology chapter, majority of the researches on academic procrastination are done on students studying psychology as a subject. But this study explores the prevalence of academic procrastination in engineering students in Indian culture. While it has been reviewed that arts and engineering students differ in creativity (Zare, 2011), there might also be some personality differences among them. In a study by Elton and Rose (1967), male students transferring from a College of Engineering to Arts and Sciences or Commerce colleges were contrasted on measures of aptitude and personality. Findings indicated that significant personality differences exist between those who stay in engineering and those who transfer to another college, and that the college to which the transfers were made could be identified by those differences. Thus, the disparity in the present result could be attributed to such differences.

As identified in the review of literature, procrastination in the academic as well as non-academic field was not related to personality traits- openness to experience and agreeableness (Johnson & Bloom, 1995). Thus it was hypothesized that there will be no difference in high and low procrastinators on openness to experience and on agreeableness. The results indicate that students low on academic as well as on non-academic procrastination exhibit more of openness to experience as matched to others.

Considering the comparison, low academic procrastinators show more of openness to experience as compared to high academic procrastinators. Similarly, low non-academic procrastinators show more of openness to experience as compared to high non-academic procrastinators. But the relationship could not be ascertained as difference was not found to be significant.

On the other hand, the personality trait agreeableness indicated a contradictory finding. Low academic procrastinators were found to be more on agreeableness as compared to high procrastinators but the difference was not significant. Further, low non-academic procrastinators were found to be significantly high on agreeableness as a personality trait in comparison to high non-academic procrastinators. Although, agreeableness has been shown to be positively correlated with educational accomplishment of the students (Aremu, Williams & Adesina, 2011), it is not yet linked to their procrastination tendency. Thus, the present study establishes a relationship in which low procrastination has been related to a tendency to be compassionate and cooperative in whatever one does. It indicates that students low on non-academic procrastination have significantly more of agreeableness as compared to their counterparts. The reason for this can be attributed to the fact that agreeableness involves a tendency to trust others and perform according to what is generally said and not being apprehensive and doubtful of what others say and do. Thus, such people do not delay the tasks because they do not put in effort themselves and initiate the task as is told to them, i.e., they do not put hindrances in the process of an ongoing activity.

Summarizing the results relating to personality traits, it can be said personality traits determine the behavior of the individual to a great extent. The present findings

suggest that as predicted high procrastinators are significantly high on neuroticism and significantly low on conscientiousness. Also, as hypothesized, no significant difference in high & low procrastinators on openness to experience is found. But contrary to the other hypothesis formulated high procrastinators are found to be significantly low on extraversion and high on agreeableness. These two findings add a new dimension to the study of academic procrastination and call for further research with focus on the factors responsible for such novel discovery.

Reasons for academic procrastination

There are a number of factors that influence the occurrence of procrastination. In the earlier sections of the discussion, it has been pointed out that lack of academic motivation and presence of certain personality traits in an individual may result in procrastination. Here, in this section, the emphasis is on the reasons that students report for their delaying behavior. It has already been acknowledged that evaluation threat (Bui, 2007), low self-esteem (Ferrari & Emmons, 1995), perfectionism (Lay, Kovacs & Danto, 1998), time management (Lay, 1992), and the like are all specified reasons for procrastination. A factor analysis by Solomon and Rothblum (1984) point towards two causes- fear of failure and task aversiveness; which were the most significant reasons of procrastination. The same results were reported by Onwuenbuzie and Collins (2001). However, Clark and Hill (1994) identified evaluation anxiety and task aversiveness as two primary factors through factor analysis.

The result of the percentage analysis used for the investigation of reasons of procrastination for the present study indicate that laziness and time management are two the most cited reasons for procrastination in academic tasks. These two reasons were

reported in a study by Yong (2010). Laziness has been persistently considered as a major factor of not letting the task started (Özer, Demir & Ferrari, 2009). According to the factor analyses of the reasons of procrastination by Solomon and Rothblum (1984), the second factor which accounted for 18% of the variance relates to laziness and task aversiveness. Laziness has been consistently been reported to have adverse consequences for an individual, be it academic, day to day activities, health issues and the like. In the present time, one has a number of distractions readily available such as variety of T.V. channels, video games, surfing the net, vast range of online games and shopping, chatting online with friends and sometimes mere checking of other people's status and posts on social networking sites. Such diversions make people glued to them as they are entertaining and do not require effort. It automatically poses a hindrance to initiate any kind of activity with determination as it acts as an escape to a relaxing and enjoyable world. The hectic life threatens the individuals' indulgence into pleasure oriented tasks and thus whenever one feels a little exhausted; he pampers himself by not doing anything and just being lazy.

Not being able to manage time as a reason for academic procrastination indicates that high procrastinators are unable to organize their time, they feel overwhelmed by work assigned to them and cannot prioritize the tasks at hand. Lay and Schouwenburg (1993) examined the relation of time management and procrastination in which time management was regarded in conditions of aims and priorities at hand, using technicalities in work the perceive control of time. They found that time management was inversely related to the delaying behavior. High procrastinators have difficulty getting anything done because they are constantly switching from one task to another or

trying to decide what to do next. All these factors pose a hindrance in starting to work for a task and thus lead to procrastination. It has already been discussed that high procrastinators are low on conscientiousness and being lazy or the inability to manage time and work is one of its characteristics.

The next prominent reason for procrastination in students was indecisiveness. It was found to be one of the reasons in a study by Yong (2010). Such individuals are unable to decide what to do about the task at hand and also how to do it. They have various options but are unable to choose among them or simply spend too much time trying to decide which results in the delay. This can also be related to the personality trait neuroticism which was found to be an important attribute of high procrastinators. High procrastinators are found to be usually high on neuroticism and thus are unable to decide things because of the anxiety associated with it. Peer pressure is the next reason to be cited by high academic procrastinators. In certain situations, one feels pressurized to do certain other activities which their friends are indulging into. A procrastinator may not initiate a task realizing that his counterparts also have not started it as yet.

Although, task aversiveness has been consistently found to be an important factor contributing to academic procrastination (Solomon & Rothblum, 1984;Lay, 1992; Clark & Hill, 1994; Onwuenbuzie & Collins, 2001), in the present findings it came out to be the sixth most cited reason with 27% of the high procrastinators delaying because of their disliking for the task.

The least cited reason by high academic procrastinators for their delaying habit was fear of success. It indicates that only a small number of high procrastinators feel that their punctuality would be not be appreciated and they would be disliked by other

students for doing the work in time. Also they might be not apprehensive that the success that comes with the regularity of work would lead to better expectations for future.

Although gender differences in the prevalence of academic procrastination have been widely reported (Pala et al., 2011; Sirin 2011), studies describing the gender difference in the reasons given for procrastination by male and female students are not extensive. According to Özer, Demir and Ferrari (2009), considerably more females than males report higher procrastination in the educational setting as a result of fear of failure and lethargy. Whereas male students attributed academic procrastination more to factors such as risk taking and revolt against authority than did female students. On the other hand, Konovalova (2007) reported that no gender difference in the reasons for procrastination was found. The chi-square analysis in the present study also provides a similar finding. High academic procrastinating males and females do not differ in any of the thirteen reasons given for procrastination. The results are in line with the hypothesis formulated.

To summarize the findings of the overall study, it can be said that the present research had significant contributions to the field of procrastination in general and academic procrastination, in particular. It has been revealed that high and low academic procrastinators differ in their non-academic procrastination tendencies emphasizing the fact that procrastination is a habit because of which an individual delays performing tasks or initiation of a task irrespective of the field, academic or non-academic. Motivation factors influencing procrastination include intrinsic motivation and amotivation with high procrastinators possessing more of amotivation and less of intrinsic motivation indicating that students delay tasks because they do not possess intrinsic intellectuality and innate

psychological need for competence or they do not have a sense of purpose or direction. The personality traits that have been revealed to play a role in procrastination include neuroticism, conscientiousness, agreeableness and extraversion with high procrastinators being more on neuroticism and agreeableness and less on extraversion and conscientiousness. Among the reasons found for academic procrastination, laziness and time management are the two most cited ones although no gender difference in the reasons for procrastination was found.

CHAPTER 6

IMPLICATIONS & LIMITATIONS

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The overall findings of the present study encompass the association of academic and non-academic procrastination with motivational factors and personality traits. It also explores the reasons given for the delaying habit and gender difference, in these reasons. The foremost finding of the study indicates that procrastination is a reasonably constant characteristic of an individual and includes his/her behavior in all aspects of life, be it academic or general day to day tasks. Also the conclusion that high procrastinators have more of neuroticism and agreeableness in their personality, point towards an assumption that academic procrastination is an irreversible trait of personality and stays stable across tasks, contexts and time. But, other researchers have demonstrated that procrastination is a dynamic trait and the behavior of the individual changes overtime depending on the interaction of tasks and situations (Sarid & Peled, 2010). Thus procrastination should be considered as a behavioral effect and efforts should be made to overcome this habit for enhanced success in general, and particularly in academics.

Implications of the present study

The implication of the present study lies in the using the findings in the academic field. This can be done at three different levels. First, the students who are high on procrastination can make an effort themselves to reduce this tendency. In such a scenario, high procrastinators can decrease their habit by managing their time efficiently and adopting productive work patterns as time management and laziness have been recognized as the most cited reasons for academic procrastination in the present study.

This can be done by minimizing distractions from the studying environment by studying in comfortable, quiet and clean setting. Such surroundings lead to positive affect which can in turn help in concentration on work and decrease the probability of delay. A suitable time table for studying with strict timings to ward off distractions, by turning off the television or cell phones can also be helpful. This can give them a sense of control and freedom. One can further overcome procrastination by adopting a positive attitude towards learning by planning and prioritizing the tasks at hand, so that it can be performed in a conflict free manner. Such practices can inculcate conscientiousness trait in their personality which has been found to be related to low procrastinators in the present research.

The second level where procrastination can be dealt with is through teachers and instructors. It has been established (Milgram, Sroloff & Rosenbaum, 1998) that an individual usually procrastinate on things that they don't like doing or tasks that are imposed on them by others and external circumstances. Keeping these points in mind, a teacher can help to avoid procrastination behavior in the students. Tasks which are expected to create resistance and thereafter procrastination in students should be relabeled in a less threatening manner or as demonstrated by Ferrari and Tice (2000) they should be made a fun and pleasurable activity. However the teacher should keep in mind that the tasks should be challenging yet fun, to increase the probability of their completion. (Ferrari & Scher, 2000). The tasks can be made interesting by using realistic projects which are of personal relevance to the students and which require them to use a variety of skills. This can help to increase intrinsic motivation through stimulation which has been found to be related to lesser degrees of procrastination as indicated in the

present results. Besides this, the students should also be provided supervision and support throughout the course and should be given appropriate required material before assigning the work. Timely feedback and required clarifications can be done at regular intervals.

Teachers should encourage group assignments in which the group can be structured in such a manner that it consists of both high and low procrastinators. In this condition, high procrastinators being in direct comparison with more successful students will avoid delaying the tasks. The technique of breaking large assignments into more manageable interdependent parts has also been shown to decrease procrastination (Ackerman & Gross, 2005). Last, but not the least, strict deadlines with checkpoints along the time frame can be provided to students to monitor their progress. In such a case, reminding through SMS texting has remarkably been shown to reduce procrastination (Davis & Abbitt, 2013). In fact, a better version of deadline can also be provided by giving a specific time span, for example, instead of saying "projects have to be submitted on Friday" the substitute can be, "projects can be submitted from Monday to Friday". Here the implicit deadline starts from Monday and thus high procrastinators will initiate the task accordingly and end up submitting the tasks before the actual deadline. In this way a teacher can create an environment best suitable for learning especially in a technical institute (Tulsi & Poonia, 2012).

The third and the most significant level to deal with procrastination in the academic setting is by employing a psychological counselor in educational institutes. In India, The National Curriculum Framework for School Education (NCFSE) through National Council of Educational Research and Training (NCERT) has made a guidance counselor mandatory for every higher secondary school. Such professional guidance and

counseling are required at undergraduate or post graduate level too because students being in their adolescent stage are characterized by various changes which tend to disturb their equilibrium physically and psychologically (Tung & Sandhu, 2008). The need for a separate psychologist arises because this job is demanding in itself and may not be fully accomplished by a teacher. Teachers are themselves bound by timelines to cover a particular coursework and follow a prescribed pattern. Moreover, they have to deal with large groups of students at one time. Because of such restrictions and time constraints they may not be able to identify the high procrastinators among average and low procrastinators and possibly will not be able to use various techniques and strategies to reduce or overcome procrastination in academic settings.

Thus, the major task of a psychological counselor is to create positive attitudinal behavior as it has been proved to be effective in psychological well-being and satisfaction of an individual (Rastogi & Garg, 2011) and hence will create better environment for learning. Thereafter, a psychologist should categorize students according to their delaying behavior patterns to deal with them accordingly. A counselor can make the high procrastinators self-aware that previous experience of procrastinating had negative effects on performance and discomfort or regret later and hence diminish the effect of amotivation which has found to be of significant importance in high procrastinators. The psychological counselor can also encourage the students to achieve certain ends and enjoy the accomplishments later leading to lower levels of procrastination in students. As there are individual differences in the reasons for procrastination, the counselor has to take into consideration the reasons a student gives for not being punctual and hence deal accordingly. Depending upon the requirement of the case, the counselor can help the

student to resolve role-conflict, increase self-esteem and assertiveness, decrease indecisiveness, fear of failure and dependency. As indicated in the results of the present findings that high procrastinators have low intrinsic motivation, certain techniques can help a student to increase the level of intrinsic motivation. For this purpose, the counselor can coordinate with the teachers to get better performance from students. This can be done by encouraging the teachers for organizing group work, making the academic tasks less threatening by including some enjoyable activities, promoting learner-centered teacher behavior by showing interest in student's questions and accomplishments and by encouraging students through positive comments regarding their abilities. The students can be provided with challenging tasks rather than very difficult ones. Whenever possible, the instructors should allow the students some freedom to choose project topics or assignments according to their specific goals or interests. Regular workshops and seminars can also be conducted on a general level highlighting the positive effects of time management and regularity and the ill effects of procrastination.

Limitations of the present study

Considering the limitations of the present study, few points need to be mentioned. The study could have involved a comparison of engineering students with students from humanities stream. To strengthen the result, rather than being dependent on self-report measures, future researches can use actual behavioral measures of the subjects. This can be done by experimental manipulation of task characteristics to observe actual delaying behavior in different treatment groups. Further researches can use other variables to delineate a clear and complete representation of procrastination. Other factors that can be included to study procrastination are family variables (parental involvement and

expectation), personal variables (academic goals, causal attributions, task value, learning techniques), and social variables (peer demands, societal expectations).

Further, as there are contradictory evidences for gender differences in prevalence and reasons provided for procrastination in the literature, procrastination as related to gender roles need to become the focus of future research. Thus, procrastination can be studied with some other variables, in another academic area, with more even gender division, in relation with other streams, using older or younger subjects and different time periods (starting of term, before exams and after exams). Such a study would generate a comprehensive understanding of procrastination as a whole.

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