

Psychological factors affecting student's academic performance in higher education among students

Riya Bhattacharya¹, Dr. Bani Bhattacharya²

¹ Research Scholar, ² Associate Professor

^{1,2} CET, Indian Institute Of Technology (IIT) Kharagpur, India

Abstract- *The purpose of this study is to identify psychological factors that affect Grade Point Averages (GPA) among the students pursuing higher education (HE) especially engineering students in a premier institution of the country and to raise a set of research gap leading to selected research questions. The analysis included a through literature review of the selected research work from the year 2000-2001 to 2014-2015. From the literature review it was found that psychological factors such as stress, anxiety, suicidal tendencies, substance abuse significantly affect GPA. In short the psychological factors have negative impact on GPA.*

Purpose - *The paper attempts to reports a comprehensive review of Psychological factors affecting Grade Point average (GPA) among students in higher education especially engineering students in leading institutions of the world and raises a set of research gap leading to selected research questions.*

Methodology- *Articles which have been published in selected peer- reviewed international journals from the year 1999-2000 to 2014-2015 have been considered. The articles were shortlisted based on various author's perspective viewpoint. The articles contributing significantly in the domain of psychological factors affecting GPA were finally selected and identified.*

Findings- *It has been found through the literature review that cognitive and non-cognitive factors affect Grade Point Averages of the young adults.*

Research Gap- Inside the article

Keywords- *Stress, Grade Point Average (GPA), Anxiety, Depression, Cognitive Factors and Non-cognitive factors.*

INTRODUCTION

Grade point Averages (GPA) represent students academic achievements. A good GPA or CGPA is helpful to the students to pursue higher studies. But a low GPA affects the students career adversely. The two possible factors which may affect GPA are cognitive and non-cognitive factors. Both of these contribute significantly to all round development of a student. The aim of this article was to review previous research work done on stress, anxiety suicidal tendencies experienced by students while pursuing higher education and their influence on the student performance in the form of GPA. To summarize this research paper a literature review in the last 15 years is conducted. Students' reaction to stress can be divided into: emotional (fear, anxiety, worry, guilt, grief, or depression), cognitive reactions (i.e. their appraisal of stressful situations and strategies, behavioural (crying, abuse of self or others, smoking and irritability) and physiological (sweating, trembling, stuttering, headaches, weight loss or gain, body aches). (Misra et al. 2000, p. 238) as a result students engage into unhealthy behaviours and practises. College years play an important role in the development of one's character. Character is defined as emotional, psychological and behavioural responses to life situations. During the college years the five domains of beliefs i.e safety, trust, power, esteem and intimacy (Cognitive-Behavioral Theory, A. Antonio and Stella M) are strongly associated with one

another. The student goes through various kinds of positive and negative emotions during this period. As a result he/she tries to rationalise various judgments, appraisals, and assumptions associated with specific life events resulting in unpredictability and uncertainty. Unpredictability and uncertainty can lead to anxiety, depression, eating and sleeping disorder, internet addiction and in an extreme case substance abuse and suicide. Higher Education years are clouded with unpredictability's. (Samovar et al., 2007). Sometimes psychological effect results to provoke security concerns, (Herman and Schield, 1961) resulting in a student experience of loneliness. Sometimes loneliness is accumulated due to loss of contact with families and social loneliness because of loss of contacts and networks, according to Weiss (Sawir E, Marginson S, Deumart A, Nyland C, Ramia G). Ting-Toomey (1999) described this process as an intercultural journey, moving across from security and familiarity to insecurity and unfamiliarity and in an extreme case resulting to loss of dignity and self-esteem. Family has been an important source of support especially for Indian students (Brown & Robinson Kurpius, 1997; LaFromboise, Berman, & Sohi, 1994). Through various literature review it is seen that, family encouragement and support are essential for academic persistence and achievement (Kidwell, 1994). Few studies, however, have empirically examined the role of family support in the educational experiences of Indian Students. Ninety-five percent of college counselling centre directors surveyed said the number of students with significant psychological problems is a growing concern in their centre or on campus. Seventy percent of directors believe that the number of students with severe psychological problems on their campus have increased in the past year (American Psychologist Association, September 1, 2011 through August 31, 2012). There are various types of mental health problems. In this study we have identified five major mental health problems i.e Depression, Anxiety, Suicidal tendencies, Substance abuse and Internet addiction.

Literature Review

The term non cognitive factors was firstly used by Nobel prize-winning economist James Heckman. According to him non-cognitive means beyond academic knowledge and academic skills. Motivation, time management, selfregulation, academic mind-sets and learning strategies are being termed as some of the non-cognitive factors (Nagaoka et al, 2013). Cognitive factors means characteristics of the person that affect performance and learning. Cognitive factors acts to modulate performance so that performance may improve or decline (Springer webpage). Cognitive factors include cognitive functions like attention, memory, and reasoning. Cognitive factors are internal to each person and serve to modulate behavior and behavioral responses to external stimuli like stress. Performance on various activities of daily living are the due to cognitive factors. Messick (1994) refers to cognitive style as characteristic modes of thinking, perceiving, problem solving, and remembering that may influence how a person approaches a problem or a particular task. Students experience more stress and emotional turmoil during the adolescents time. Buchanon and Holmbeck (1998) reported that college students go through symptoms of internalizing disorders such as anxiousness, depression and insecurity. At times they are reckless, impulsive and rude. Holmbeck and Hill (1988) surveyed college students and confirmed through their study that adolescents frequently fight with their parents. Thus the paper confirms that adolescents are difficult to handle. They are much more emotionally volatile and vulnerable with frequent mood disruptions/ mood swings and risky behaviours. At times they engage in activities that are not only harmful to themselves, society as well as people around them. Adolescents suffer from various psychological distortments, substance abuse and family problems which affects their academic performance. Previous literature review concludes that adolescents suffer from one or more psychological problems during this period. Some problems are identifiable and transient whereas others are not (Chhabra and Sodhi 2011). The rising expectations and responsibilities generates negative emotions which lead to

suicidal tendencies among young adults. Fights among parents and young adults is more during the adolescents time period. Under such situations friends acts as emotional support to young adults. Lack of friends can make them more depressed and anxious thereby they become adept to smoking, drinking and substance abuse (Chhabra et al. 2011). The major academic stress for undergraduate students include lack of leisure time, academic performance, fear of failure, academic overload, finance, competition between students, and relationships with university faculty. The study stated that "low academic hardiness" causes more stress to the students. Hardiness is defined in terms of commitment and challenge across the years of study given by the student. Excessive stress dampens academic performance and leads to dropping out. College student experience stress at particular times and stress can be classified into three main categories academic pressures, social issues and financial problems. Other studies demonstrate that the most common stressors for undergraduates were fear of failure. Striving to meet assessment deadlines, feeling overwhelmed by their workload finding the motivation to study. Stress related to examinations and time management is difficult to handle by the students of age group 21-23 years (Spiridon, Evangelia, 2015). It has been found that high level of stress affect mental, emotional and physical health. Stress to a high level may also have a negative impact on students' learning ability, may diminish a students' sense of worth and might affect their academic achievement (Spiridon, Evangelia, 2015). Stress may be common phenomenon among university students. The symptoms, consequences, and causes of stress differ from one academic institution to another mainly due to nature and type of work and curriculum settings. Stress is an individual's perceptions that they do not have the resources to cope with a perceived situation from the past, present or future (Lazarus et al. 1984). According to (Lazarus et al. 1984) stress is not an uni dimensional concept and there are various types of stress. A situation may be stressful for one individual whereas it may not be stressful for another. Some student experience a definite level of stress (Brown et al. 1999; Bush et al. 1985) which cumulates into mental health problems (Andrews et al.

2004, Stanley et al. 2001; Phippen 1995). However stressful situation can have negative effects on some individuals (Abouserie 1994). This is particularly true for students going through a transition phase ie shifting from home to university campus (Fisher 1994). At times, students experience stress as they leave too much to accomplish in a very short span of time. As a result they sleep less which increase their stress level to a greater extent (Hardy 2003). High achievers experience more stress as students attitudes towards studies determine individual stress level (Hughes 2005 and Robotham, 2008). Academic problems and hassels are reported to be the most common source of stress among students. The most stressful daily hassels include constant pressure of studying, too little time, writing term papers, taking tests, future plans, and boring instructors. Stress can lead to various negative outcomes such as poor health, depression and poor academic performance (AKGUN et al, 2010). A number of studies have found a relationship between stress and poor academic performance (Clark & Rieker, 1986; Linn & Zeppa, 1984, Struthers, Perry & Menec, 2000). Felsten and Wilcox (1992) found a significant negative correlation between the stress levels of college students and their academic performance. In a similar study, Blumberg and Flaherty (1985) found an inverse relationship between self-reported stress level and academic performance. Struthers et al. (2000) also reported that a high level of academic stress was associated with lower course grades. Students experience a high level of academic stress due to exams, assignments, time pressure, grade pressure, and uncertainty. In summary, this stress has a detrimental effect on their academic performance (AKGUN et al, 2010).

One of the reasons which affect their academic performance in terms of their GPA is boredom. Boredom establishes a cause and effect relationship with lack of motivation. Lack of intrinsic motivation, self -determination and boredom establishes a vicious circle (Iso-Ahola & Weissinger, 1987; Weissinger, Caldwell, & Bandalos, 1992). Boredom instills problematic behaviours among young adults leading to alcohol and drug abuse (Iso-Ahola & Crowley, 1991; Orcutt, 1985),

higher rates of dropping out from school, college and university (Farrell, Peguero, Lindsey, & White, 1988). These behaviours are neither socially acceptable nor they are productive towards individual development. To a greater extent some tasks may become repetitive as adolescents cognitive abilities become more sensible and mature thus leading to feelings of boredom. Individuals experience more storm and stress during adolescents compared to any other age. Young adults residing in west experience more stress compared to adolescents in traditional cultures. According to the previous literature the storm and stress that adolescents goes through is due biological imbalances is may not be write (Arnett J.J, 1999). Bean and Vesper's (1990) have studies six background, personal and organizational variables. According to them nonintellectual factors play an important role in leaving from college. Encouragement by others have a direct and indirect effects is pursuing or leaving higher education and further it is a form of family emotional support. Desire to finish college is seen as a non-cognitive factor which acts as a form of motivation (Boggiano,1992). Pittman and Boggiano (1992) believed that an adolescents innate or natural desire to learn acts as self motivation and selfdetermination. It is this aspiration and motivation that works hand in hand to develop a student academically (Allen, 1999). It has also been found through literature review that students who discuss personal problems with parents have lower depression, anxiety and stress than those who do not. The study concludes that adolescents mental health is a serious issue and it needs wide array of research (Bhasin et.all, 2010).

Stress vary according to individuals and it depends on number of interacting variables Abouserie (1994). The major factors identified are as follows:

Stressors Related to Examination

Exam can be a cause of stress. High level of exam stress can cause nausea, stomach pains, changes in eating and sleeping disorder (Mechanic 1978). Through his study he found that majority of students stress level reduced after the first exams.

According to the study, for a student it is the prospect of taking exam not the exam itself that contributes to the stress levels. It is also proven in a study by Gadzella et al. (1998) that it is the anxiety associated with the exam rather than the exam itself that creates emotional and physiological stress.

Stressors related to the transition to university

At times students experience stress due to transition from their native place to university. Some students were first timers who shift from their place of origin to the university campus. Adjustment to a new social environment away from home and further to maintain higher academic performance adds to the stress level. In such situation support from university administration and peer group can be quite helpful. But support to a greater extent can be demeaning as well as provoke negative thoughts mainly due to support is a relative term and it can be inappropriate as per individuals needs (Edwards et al. 2001). This phenomenon can at times lead to suicidal tendencies (Bernard et al. 1982).

Stressors Related to financial issues

Financial issues can also trigger stress among students. There arises a significant relationship between financial problems and mental health as per the study conducted by the London University (Roberts et al. 1999).The impact of strain on studying also increases if the student undergoes through the financial constraint (Foster 1995). As a result student take on part time employment to meet their daily needs (Robotham, 2008).Stress can also lead to anxiety, suicidal tendencies and substance abuse and depression.

Anxiety-American Psychological Association found through a survey that Anxiety is the top presenting concern among college students (41.6 percent), followed by depression (36.4 percent) and relationship problems (35.8 percent).

Substance Abuse- Substance abuse means individuals consuming drugs, alcohol, cocccain, etc of one or more such aversive elements. These can have devastating effects not only

on individuals but also to their families and ultimately to the society. The lifetime prevalence of alcoholism (alcohol dependence and abuse) is 30%. It is well established that the heritability (the genetic component of the variance) of alcoholism is around 50%. Similarly, the heritability of cocaine and opiate addiction is around 60-70% (Enoch 2010). An important risk factor for alcoholism or drug dependence is having a parent with the disorder. It is also a well-known fact that a maltreatment experienced in childhood, are also predictors of adult psychopathology, including addiction to alcohol and drugs (Enoch 2010). Confidence is a source of emotional security bolstering dignity. Without confidence students lack dignity and they could not effectively communicate with culturally different people (Noparat et al 2011).

Depression- Depression among adolescents can lead to increase in suicidal behaviour, tobacco consumption and other substance abuse in adulthood. Through the study it was seen that depression and anxiety is more among females than among males. Depression, anxiety and stress is found to be higher among students whose parents continuously fought among themselves or inflict physical violence among them and to them. The pressure to perform well also leads to stress, depression and anxiety among adolescents. The general purpose of this study is to understand the cognitive and non-cognitive factors affecting the Grade Point Average (GPA) of the young adults. The young adults was defined as students pursuing higher education in the age group of 21-23 years. Hall (1904) has confirmed that adolescents as described as period ranging throughout twenties. Students experiences more stress and emotional turmoil during the adolescents time. The rising expectations and responsibilities generates negative emotions which lead to suicidal tendencies among young adults. Adolescents suffer from various psychological distortments, substance abuse and family problems which affects their academic performance. Previous literature review concludes that adolescents suffer from one or more psychological problems during this period. Some problems are identifiable and transient whereas others are not (Chhabra

and Sodhi 2011). Fights among parents and young adults are more during the adolescents time period. Under such situations friends acts as emotional support to young adults. Lack of friends can make them more depressed and anxious thereby they becoming adept to smoking, drinking and substance abuse (Chhabra et al 2011).

Depression is a common disorder that impacts an individual's ability to perform life activities, especially in the workplace. Depression related reductions in academic performance are an important outcome of the disorder. It reflects a reduction in learning opportunities, a decrease in the level of information absorbed and/or a decrease in their ability to demonstrate learning. Additionally, depression can have an effect in students' future careers by delaying entry into the job market or obstructing the job search process (Hysenbegasi et al 2005). Suicide is defined as the act of deliberately taking one's own life. Suicide is a fragile state of mind where the individual becomes very vulnerable to take his/her own life. In a Report by Centres for Disease Control and Prevention, (2011), there has been 39,518 suicides reported in the U.S., making it the 10th leading cause of death that year. It's important to note that most students who are suicidal suffer from depression or other mental illnesses. Many students experience frustration and doubt, but sometimes those thoughts gain a frightening momentum, bringing students to a place where they seriously consider ending their lives.

Further, it can also be said that College students who recount residing with an alcohol-abusing parent report greater challenges to behavioural regulation. It is important for professionals who work with young adults and their families to convey how both problematic drinking and family environment may be associated with the ability to regulate behaviour. Family environment plays an important role in developing effective problem solving skills (Schroeder and Kelley 2008).

Methodology

1.Data- It is a literature review paper. Data is collected for 15 years from 2000-2001 to 2014-2015. Each year contains 10 review paper dealing with student stress, anxiety and other psychological problems. Total of 150 papers are collected. However all those were not relevant for the study, therefore few papers were excluded from the analysis part. The important papers were given in the reference section. The papers were collected from four academic research website: *Jstor, Google Scholar, Microsoft Academic Search, and Scopus*. The paper dealt with students of age group 21-23 years and to a greater extent students in their late twenties of the premier engineering colleges of the globe.

2.Analysis- It was found from the literature review that psychological factors such as stress, anxiety, suicidal tendencies, substance abuse significantly affect GPA. In short the psychological factors have negative impact on GPA. Stress is an individual's perceptions and that it differ from one another. A situation may be stressful for one individual whereas it may not be stressful for another. So, our research agree with previous literature survey however few disagreements are enlisted in the limitations section.

Research Gap

1.Through the eminent sources it has been found that expected to be country's best graduates left the premier institute without getting an engineering degree in the final year.

2.There is limited exhaustive study on the account of low Grade Point Average (GPA) especially for on campus engineering students where students primarily reside in hostels.

To address the issues raised in this paper, a set of research questions are broadly associated into five categories. They are as follows

- > Cognitive and Non cognitive factors
- > Parental Support

- > Socio-environmental factors.
- > Financial Support.
- > Students shifting their base i.e leaving home to reside in hostels.

Limitations of the study

1.Stress is a relative term. The nature, extent and degree of stress is a individualised concept. It differs from one individual to another. So, to measure stress, anxiety and other psychological factors involves great conviction. As time and certainly patience is limited we have not performed an empirical work to measure the above stated factors.

2.The work mainly dealt with young adults ranging from 21-23 years. In this study we are concerned about students pursuing their college and university education. We have not included secondary and higher secondary student though +10 level students can also be referred as young adults.

3.This study emphasized only on engineering students. Medical students, humanities and social sciences and other technical and non-technical students are excluded from this study.

Future Work

While studying the literature review it was found that the definition of stress and anxiety overlap with each other. In the literature survey it is found that examination stress and academic stress are not clearly defined. The definition with respect to the terms lack clarity. In the future work we will try to overcome this barrier of definition and ambiguity of concept (Putwain, 2007). In the future work we will try to measure stress and anxiety empirically and try to overcome the considerable amount of biases associated with these definitions. An honest effort will be given to reduce those biases (Putwain, 2007).

Conclusion

The research found through the literature review that anxiety, stress, substance abuse affect the GPA. So, we establish a relationship that both cognitive and non-cognitive factors are important to achieve academic excellence. The high level of stress eventually contributes to the low self-esteem (Hudd et al. 2000). Some researchers argue that low self-esteem can cause a prolonged period of stress. Other negative outcomes associated with stress include increased alcohol consumption (Morgan 1997), smoking (Naquin et al. 1996), reduction in immune system functioning (Sarid et al. 2004) and an increased tendency to consider suicide (Hirsch et al. 1996). Due to the above stated factors academics get severely hampered. There exists a positive relationship between stress and academic performance. Several studies have found that stress experienced while studying hampers academic performance (Struthers et al. 2000; Linn et al. 1984; Clark et al. 1986). A conclusion confirmed by Bennett (2003) taking business undergraduates as subjects, found a significant correlation between stress and poor academic performance. The promising question that arises whether student acknowledges the fact that they are in stress and whether or not they need medical help. Suffering in Silence can have negative impact on students' wellbeing. 'This may affect their possible future studies' (Roach et al. 2000). The major cause of stress for an undergraduate or graduate student is examination and examination results, studying for exams, work overload, the amount of material to learn and the need to perform well. Socio-economic factors also play an important role in determining stress and anxiety among undergraduate students. Financial problems and lack of time for friends and family also work hand in hand to make the student anxious (Abouserie, 1994). As per previous literature review lower self-esteem and lower self-concept triggers stress among undergraduate students. A parallel finding was that positive self-esteem was related to an individual's self-confidence in their academic ability (Michie et al., 2001). Academic mindsets improve academic perseverance and academic behaviours.

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