

**ANALYSIS OF RELATIONSHIP BETWEEN
PERSONALITIES, INTELLIGENCE AND WORKPLACE
HAPPINESS AMONG MEDICAL PROFESSIONALS IN
WEST BENGAL**

**A Thesis Submitted to North Bengal University
for the award of the Degree of Doctor
of Philosophy in Commerce**

By

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Under The Guidance of
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RAJA RAMMOHUNPUR
2018**

DECLARATION

I hereby declare that the work reported in the Ph.D thesis entitled “**ANALYSIS OF RELATIONSHIP BETWEEN PERSONALITIES, INTELLIGENCE AND WORKPLACE HAPPINESS AMONG MEDICAL PROFESSIONALS IN WEST BENGAL**” submitted at North Bengal University, is an authentic record of my work carried out under the supervision of Professor **PALAS R. SENGUPTA**. I have not submitted this work elsewhere for any other degree or diploma. I am fully responsible for the contents of my Ph.D thesis.

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Abstract of the Thesis

Happiness has been the subject of study, since the beginning of written history. It is an elusive concept and yet a familiar tune in modern society. The concept has been the subject of much scrutiny and debate in recent years. Happiness refers to the experience of a sense of joy; satisfaction and positive well-being combine with a sense that one's life is good, meaningful and worthwhile. It is estimated by the researchers that more than half of the world's population are not happy. They lack motivation and are not enthusiastically and efficiently affianced in the world. The findings of research studies show that happiness manifests various positive results. Happiness gives us the drive to stay, the power to move forward and the motivation to do good for others.

An individual's happiness depends on three factors-----personal life, work life and social life. We spend more than one-third of our life at work or work-related activities. Since the work is central to our existence, we tend to build our identities around work and hence, work has become one of the key determinants of our health and happiness.

The workplace happiness is an important concept both for individual and organization. Happiness at work is a feeling of happiness derived from work. Happiness in the workplace contributes many positive outcomes such as increasing productivity, quality, customer satisfaction, creativity and innovation, flexibility, increases profitability, and improved interpersonal relationships. On the other hand, it reduces the risk of accidents, the rate of absenteeism, sick leave, short term or long term disability, burnout, job turnover rates, various health conditions, disability and overall health care costs.

It is imperative for any organization to agree on whether their employees are happy with their present work. Happiness is not an indistinct and unreal concept but it could help the organization to be successful and to direct a lot of financial implications for the company. It is, therefore necessary to generate and sustain employees' workplace happiness.

An employee is said to be happy at work if his or her cognitive abilities, talents and interests match those required by the job or if he/she fits the job. Job fit makes an individual happy. Job fit is there, where the passion and talents of the individual matches those required by the job; a person is doing what he/she likes to do or what he/she can do the best.

Psychologist, Mihalay states that happy employees are engaged at work. An American study shows that 75% of employees of companies are not engaged at work and one of the reasons for disengagement is lack of job fit. The lack of job fit does not mean that they do not have proper academic qualification or skills. This lack of job fit cost havoc to the organization and to individual cause mental health problems. One study estimated the cost of this disengagement that ranges from 254-353 billion dollars which is larger than US budget for education and defense.

Analysis of happiness theories shows that happiness is influenced by life circumstances and major life events. Psychologists' set point theory of happiness believes that an individual has a fixed set point around which happiness fluctuates. This set point is mainly innate and determined by hereditary factor and personality. The idea of biologically predetermined set point implies that happiness level will remain stable over time and irrespective of life situation some people experience more happiness than other.

In this backdrop, the present study aims to identify the combination of personality type and multiple intelligence profiles of very happy and very unhappy employees and work attributes responsible for workplace happiness. It also assessed the relationship between emotional intelligence, the locus of control, occupational stress and workplace happiness.

To meet the research objectives an empirical, quantitative and descriptive study was conducted on doctors/physician of North Bengal Medical College in West Bengal. This medical college is one of the most important public sector healthcare delivery institutions which are giving specialized healthcare service to the people of the north zone of West Bengal. The research tools applied to carry on the survey were

The Myers Briggs Type Indicator, Jobs Central Works Happiness Indicator, Gardener's Multiple Intelligence Test, Linac's EI scale, A.K.Srivastava's Occupational Stress Scale and Loco Inventory.

To test the formulated hypotheses the researcher applied quantitative research techniques. The researcher was able to collect data from one hundred and two medical doctors. The influence of four demographic factors considered in the present study is (gender, age, educational level attained and years of experience in profession) not significant in ascertaining the level of workplace happiness. The research hypothesis that there is no difference in the combination of personality types and intelligence factors between doctors who are very happy in their profession and doctors who are very unhappy in their profession is not tenable. The findings supported the other two research hypotheses that there exists a positive relationship between locus of control (internal and external), Emotional Intelligence and Workplace Happiness and there is a significant adverse relationship between Occupational Stress, Emotional Intelligence, Locus of Control and Workplace Happiness.

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LIST OF ABBREVIATIONS

FULL FORM

MBTI	Myers-Briggs Type Indicator
MI	Multiple Intelligences
Loc	Locus of control
OS	Occupational Stress
EI	Emotional Intelligence
SWB	Subjective Well-being
CWB	Cognitive Well-being
AWB	Affective Well-being
SA	Social-Awareness
SM	Self-Motivation
SR	Self-Regulation
SCA	Social-Awareness
SK	Social -skill
SD	Standard Deviation
DF/df	Degree of freedom

Chapter One

Introduction

There has been a growing recognition of the importance of mental health in the workplace. Most of our adult life is spent at work and thus, work has become one of the key determinants of our health and happiness. “Happiness in the workplace is beneficial not only to the employees but also to the employers, organizations, our community and our society” (Peter Warr, 2009).

Employees, who are happy in their work, translate happiness into learning, growing and contributing. The organization is successful because the work is done effectively, qualities are better and costs are less. Thus, it is necessary to systematically attempt a job selection and placement plan in order that optimum results are obtained from individual-organization interaction (Rebecca Fatima Sta. Maria,1993).

A well- planned job selection and placement plan assume that a good match between the character of the job and the characteristics of the job-holder be advantageous both to the organization and the job-holder. From the organization's point of view, the job gets done by a competent individual who has the skills and abilities and finds the job compatible with his interests and needs. Likewise for the individual; if the job is compatible with his/her interests and skills , he/she would be happy and find the quality of working life higher than in a situation where there is no match between his personality ,interest and ability and the work /job (Rebecca Fatima Sta Maria,1993).

1.1 Background

Job selection and placement of medical professionals in West Bengal are carried out by a selection committee based on the public service commission (PSC) and Health Department of West Bengal Government. The selection and placement of doctors are based on the needs of the institutions. Nonetheless, due consideration is given to the ability, interest, and skills of doctors. It is imperative that a job selection and placement system assure consistently high performance with minimum wastage of resources that can occur through low performance, absenteeism, and other related

problems (CIPS). A prudent long-term manpower development plan is thus essential. Such a plan would put the right person in the right job. This task of selection and placement becomes more pertinent and relevant when dealing with doctors. Doctors who are in right job able to utilize their natural talents in their jobs are more likely to be happy in the workplace. It is thus significant that this research study tests the issue of doctors job fit with respect to workplace happiness.

The right person for the right job or person- job fit makes individual happy and engaged in the workplace. Happiness at work results in various positive outcomes, including better awareness, longevity, revitalization from illnesses, and caring people against the inception of disease. Furthermore, happiness contributes to better business results and, improved interpersonal relationships. On the other hand, unhappiness in the workplace has been associated with decreased work performance, loss of productivity, increased risk of accidents, relationship conflicts at work, increased absenteeism, sick leave, short term or long term unfitness , febleness , increased rates of job turnover , various health conditions, and increased disability and health care costs (Peter Warr, 2009).

Happy people are generally more creative and solve problems in more flexible ways. People in positive moods are more helpful to others and are more likely to engage in citizenship behaviors and other helpful activities. Happy people are more pleasant to be around .Seligman (2002) points out that about 54% of people are moderately happy - yet not flourishing. These individuals lack enthusiasm and are not actively and productively engaged with the world (Llewellyn E. van Zyl et.al 2010). Many researchers work on the topic have tried to explain happiness with objective working conditions (income, working hours, etc). At present time, there has been a growing interest in understanding how intangible job characteristics and personal characteristics affect the happiness (Elena Arjona Perez, 2010). Individual differences are important inner indexes for predicting of happiness degree. Studies show that regardless of life situations, some persons experience more happiness and satisfaction than others. Today it is believed that up to fifty percent of person's happiness is predicted by their personality traits (Masoum Ali Salimian1 and Reza Hosainian, 2012). Boehm and Lyubomirsky (2008) indicated that happiness is created genetically

(50%), environmentally (10%) and by enhancing personal skills and activities (40%). Cognitive and attitudinal factors such as optimism and pessimism influence satisfaction and happiness. Self-control too boosts the happiness (Kobasa , 1982 in Mansoor Momen et.al.).

It is believed that intelligence also leads to happiness. People who are happy generally do much- complicated work better and are talented (Isen and Means, 1983). They are constructive, learn things easily, dynamic and imaginative (Isen, 2000). Much of our life outcomes such as educational achievement, occupational attainment, and job performance are influenced by our intelligence level. (Gottfredson 86a; O'Reilly & Chatman, 1994; Schmidt, Ones, & Hunter, 1992 in Yoav Ganzach, 1998). The complex mental task could be done better by the people who induced to experience happiness and existing knowledge structure has a positive correlation with positive mood. Intelligent and happy people are more flexible, creative and able to learn things by themselves. Fredrickson's 'broaden and build theory' demonstrates that the experience of positive emotions elaborate individual's transitory belief and increase the ability to perform in a different range of activities and to promote personal resources, including intellectual capital (Ruut Veenhoven¹ and Yowon Choi 2012).

Stress is an inevitable part of our modern life and can produce momentary discomfort as well as long-term consequences (Dumitru et al 2012). A mismatch between the resources and capabilities of the worker to meet the demands of jobs causes stress at work (Ricardo Blaug et.al).

The job of doctors is very stressful because their works are related to patients' well-being and need accurate and timely service (Wikipedia.org). They have to deal not only with patients but also with patient's party and any kind of silly mistake may increase the stress level of doctors. Poor medical knowledge and expectation of highly effective treatment of patient party leads to tensionfull doctor-patient relation and forced them to be frustrated (Xiaojun Chen et.al, 2013).

Research studies show that there is an inverse relationship between happiness and stress (Schiffrin & Nelson, 2010, Natvig, Albrektsen & Qvarnstrom, 2003). Personality types is an essential factor in determining stress (Cooper 2005) and self-

confidence (Cassidy & O'Connor 2004) is an effective tool in coping with it (Dumitru et al 2012). In Medical profession personal relationships with the patients is an important factor and it requires empathy and emotional involvement (www.asrn.org); so emotional intelligence is considered an essential part of this profession (Best et al 2005).

The relationship among personality ,intelligence ,stress and individual education ,occupation , performance and many other outcomes have acknowledged significant consideration in the scholarly writing, and have been criticized in the public spheres .However, there is a dearth(Sasanpour M et.al.;2012) of literature that establishes the relationship among personalities, intelligence factors , occupational stress, and happiness .

1.2 Statement of the Problem

The relationship among personalities, intelligence, and stress and workplace happiness are unclear. Some researchers have concluded that personality is a greater determinant of happiness and stress than the external factors like race, money, work, social class, social relationships, religion, leisure, etc. (Adrian Furnham and Irene Christoforou, 2007). Eternal features of the person can have a strong impact on happiness from the inside rather than the outside. Intelligence is normally related to test taking, and the research on multiple intelligences outside the classroom has been limited. In the workplace, the intelligence of employees is important because the way they interact with others affects the organization's performance. Employees hired for their knowledge and expertise have the discretion to use their skills and training, and the flexibility to experiment and solve problems as they arise. Various studies have examined the relation of personality traits to happiness and stress, and intelligence to happiness and stress, and have yielded reliable findings. Fewer studies have inspected the relationship among happiness, personality type, multiple intelligences (MI), emotional intelligence (EI) and occupational stress (OS).

The specific problem for the present study is to find whether personality and natural talent or strength of doctor's match with work nature .If it is so they will be happy in the workplace and less stressed. Happy workers are more engaged in their

jobs, more satisfied and obtain more achievements compared to their counterparts. Happy employees are less secluded in the workplace and have low tendency to leave their job (Boehm & Lyubomirsky 2008). Positive and happy feelings are related to feebleness, job turnover and non-attendance negatively. Consideration of this relationship is highly crucial since feebleness; job turnover and non-attendance are too expensive for an organization and reduce output. Therefore, organizations should look for employing and retain happy people and make an effort to increase workplace happiness (Mansoor Momeni et.al).

1.3 Research Questions

This study has the following research questions:

1. Which work attributes give happiness to doctors working in medical college?
2. The combination of which personality type and intelligence factor gives maximum happiness at workplace?
3. The combination of which personality type and intelligence factor gives minimum happiness at workplace?
4. Is there any relationship between Locus of control, Emotional Intelligence and Workplace Happiness?
5. Is there any relationship between Locus of control, Emotional Intelligence, Workplace Happiness, and Occupational Stress?

1.4 Objectives of the Research

The primary aims of the study are to identify the relation between personalities, intelligence, occupational stress and workplace happiness. In particular, the primary objectives of the research are:

1. To study the relationship between Demographic variables, Work Attributes, and Workplace Happiness.
2. To study the relationship between Personality Type (Myers Briggs Type Indicator), Multiple Intelligences (MI) and Workplace Happiness.
3. To identify the Personality Type and Multiple Intelligences of very happy and very unhappy doctors.

4. To study the relationship between Locus of control, Emotional Intelligence and Workplace Happiness.
5. To study the relationship between Locus of control, Emotional Intelligence, Workplace Happiness and Occupational Stress.

1.5 Direction and Significance of the Present Study

The study of individual differences examines how people are alike and how they are different in their thinking, feeling, and behavior. The two most popular individual differences that psychologists study are general intelligence and personality characteristics. General intelligence and personality are also classified as traits, or lasting dispositions to act in similar ways across situations, and have been allied to several organizational and individual outcomes, such as job performance, job satisfaction, career success, leadership, career prospective, and acquirement of job related knowledge . In recent years; the measurement in the domain of individual differences necessitates incorporation of multiple areas to assess (Kazdin.A.E.). Researchers tend to focus only on one set of constructs at a time when studying individual differences across domains, such as interest, personality, intelligence or values; they have also realized that a more powerful understanding of how individuals adjust to their environments will materialize when multiple areas are assessed simultaneously. The study measures personality type by the Myers Briggs Type Indicator and eight domains of Multiple Intelligences of Howard Gardener's model that are component of this rising issue of individual differences.

The purposes of the first model of the study are to identify the work attributes that make doctors happy in the workplace and to examine the impact of two psychological strengths on the degree of happiness of doctors who work at North Bengal medical college in West Bengal. One of the psychological strengths is Personality Type and the other is Multiple Intelligences that are generally less focused to their relation to workplace happiness.

The findings of this section of descriptive study may be significant to give a clear understanding of the attitudes of the employee in the workplace. In addition, the result of study would assist in strategic human resource management in selection and

recruitment process, and provide valuable knowledge about workplace happiness.

The aims of the second model of the study are to assess the relationship between locus of control, Emotional Intelligence, and Workplace Happiness, and also to examine the relationship between Locus of control, Emotional Intelligence, Workplace Happiness and Occupational Stress. The results of this model of the study give a scope to know and understand the Emotional Intelligence, Occupational Stress, Workplace Happiness and Satisfaction level of doctors who are working in the medical college. The findings of the research will help the policy maker to know the problem areas which is leading to unhappiness and cause stress among doctors and hence declining their performances. Workplace happiness/unhappiness of a doctor influenced his relation with colleague, administration and mostly with patients. The quality of medical care and doctor-patient relationship is also dependent on the level of happiness (R. Kaba and P. Sooriakumaran, 2007). The results of the research will help in recruitment as it helps to know the personality type/trait and multiple intelligence profiles of very happy medical professionals.

1.6 The Plan of the Study

The following chapter plan was adopted for the study:

Chapter-One: Following a discussion of the environment in which the problem under investigation exists, the objectives of the study is introduced in this chapter. It also portrays the research questions, research significance, and definition of terms.

Chapter- Two: It deals with the review of related literature on personality and happiness, intelligence and happiness, stress and happiness so on.

Chapter- Three: In this chapter, an attempt has been made to portray theoretical analysis, research methodology and research hypotheses.

Chapter- Four: It describes the relation between happiness and demographic variables, and analysis of Work Attributes of Happiness.

Chapter-Five: Under this chapter discussions relating to the relationship between personalities and happiness, and intelligence and happiness have been made. Here an attempt has also been made to identify the personality type and multiple intelligence profiles of very happy and very unhappy doctors.

Chapter- Six: It describes the locus of control profiles, levels of emotional intelligence of doctors, and the relationship between locus of control, emotional intelligence and workplace happiness

Chapter- Seven: Here an attempt has been made to describe the occupational stress levels of doctors, the relationship between occupational stress and workplace happiness; the relationship between occupational stress and emotional intelligence and also the relationship between locus of control and occupational stress .

Chapter- Eight: Under the final chapter of the study, overall conclusion including suggestions, limitations of the study as well as direction for future research have been discussed.

1.7 Definition of Terms

In order to ensure a common understanding of the purpose of this study the following terms are defined as follows:

Happiness: Happiness is the extent to which an individual judges the overall quality of his/her own life positively. In other words: how much an individual likes his/her life that he/she experiences (Ruut Veenhoven, 2015). Happiness at work means employees positive feelings, positive attitudes, mood, emotion and flow of states at work.

Personality: Personality is defined as a distinct merger of traits characterizing individuals, and influencing their relations with their environment. At present, there is no common definition to explain personality, though in psychology it is usually looked at as a pattern of behavioral, temperamental, emotional and mental traits of an individual, and all these together comprise a unique individual (Sarah E Hampson,2012).

Personality traits: Personality traits are unique behavior or distinctiveness that is the personification of an individual's. They are our "habitual patterns of behavior, temperament, and emotion" (Dr.TOM Danham, 2010).

Myers-Briggs Type Indicator (MBTI): MBTI is a psychological assessment tool that measures differences in personality styles and preferences. It indicates information processing system, decision-making strategies and the lifestyle of an

individual. It is extensively used in education, counseling, and management and has sufficient reliability and validity.(MBTI.org)

Personality type: A clue of personality preferences ensuing from responses to MBTI choices measuring how persons perceive their world and make judgments about these perceptions. The preferences are categorized into four dichotomous scales: Extraversion-Introversion (E-I), Sensing-Intuition (S-N), Thinking-Feeling (T-F), and Judging Judging-Perceiving (J-P). Type is articulated as four-letter combined preferences (e.g., ENFJ).(capt.org)

Personality type indices: The four fundamental personality preference scales as measured by the MBTI.(myersbriggs.org)

Intelligence: By single definition, it is not easy to define intelligence .Human intelligence is an amazing concept and in general, it is used to explain a person`s learning style, traits, skills, and competencies.(Frank Romanelli et.al. , 2009)

Multiple Intelligences (MI): Multiple intelligences are a set of eight intelligences projected by Gardner in Multiple Intelligence Theory (1983). This multiple intelligences are verbal-linguistic intelligence, logical-mathematical intelligence, musical-rhythmic intelligence, visual-spatial intelligence, bodily-kinesthetic intelligence, naturalistic intelligence, interpersonal intelligence, intrapersonal intelligence and in 2006 he added existential intelligence as candidate intelligence.(Wikipedia)

Multiple Intelligences Profiles: Multiple intelligence profiles are an intelligence report poised of an ideographical grouping of multiple intelligences.(www.springhurst.org)

Locus of control (Loc): “Locus of control refers to the extent to which individuals believe that they can control events that affect them. Individuals with a high internal locus of control believe that events result primarily from their own behavior and actions”, and in contrast individuals with high external locus of control believe that their life is control by luck, fate, and chance (T. V Rao, 2016).

Emotional Intelligence (EI): Emotional intelligence is a bunch of qualities or “abilities involving to the emotional side of life – abilities such as recognizing and

managing one's own emotions, and managing other's emotions, and handling interpersonal relationship" (Robert A. Baron in C. Ashok Kumar, 2016).

Occupational Stress (OS): Stress is the body's reaction that changes the physical, psychological or emotional adjustment or response (Dr, Stefan Ivanko, 2013). Occupational/job Stress is a complex relationship between a person and his/her work environment. It refers to the circumstances at which a person's skills and ability do not match with the work demands and requirements, and/or when the employees' needs are not fulfilled by the job environment (Ramirez et al., 1996).

Health professionals include doctors, physicians, nurse, dietitian, dentists, pharmacists, radiologist, and physiotherapists etc. The present study mainly focused on doctors /physicians.

Chapter - Two

Literature Review

In this chapter review of literature related to the subject matter of the present research is presented in eight sections. Each section reviews empirical studies carried out in India and overseas.

2.1. Studies Related to the Relationship between Demographic Variables, Work Attributes, and Happiness

Over the years researchers have investigated the factors accounted for the happiness of human beings and discovered that biological, situational and environmental were the three factors that influenced our happiness level. This section of review dealt with the relationship between happiness and demographic factors and work attributes that influenced workplace happiness of an employee, at the individual level.

Ian C. Barrett (1980) examined the interrelationships among happiness, life satisfaction, and job satisfaction, and the selected demographic, personal and work-related variables. Survey data were collected from 1,993 elementary, high schools, and community college teachers in the Southern Ontario area. The findings indicated that educational achievement and income was not significantly related to happiness, age was found to be unrelated and sex was found positively related with job satisfaction. Personal variables (satisfaction with home, marital status and health etc.) and work-related variables (job tenure, income, job title, and type of school etc.) were revealed to contribute frequently and considerably to happiness.

Suojanen Ilona (2012) in her thesis ‘Work for Your Happiness; Theoretical and Empirical Study Defining and Measuring Happiness at Work’, tried to find out whether there was any connection between happiness and work. To do so she examined the effects of the profession, age, sex, education, income and kind of values people had towards work on happiness. The study results indicated that sex was not related to happiness, level of happiness decreased with the age, the educated people were happier than the uneducated and the employed were happier than the unemployed. People working in “white collar” jobs were more likely happier than

those working in factories or outdoors. Money was a factor of happiness until a certain level of happiness was reached. Work was significant to people and the importance of work increased happiness. Work was also greatly valued, but the people who valued work much were not happier than those who did not appreciate work that much. Safety of work was an important factor of workplace happiness. The importance of work matter more than income for happiness. The quality of work and feeling of independence was highly related to happiness.

Research of **Sodikoff, Charles L (2010)** tried to indentify the factors responsible for happiness of health professionals. It showed that investment in physician service helps the organization to increase job happiness. Appointment of nurse and accountant reduced doctors' workload and freed them from administrative work and helped them to concentrate their work and hence increased happiness. Promotions of an environment of interaction with other expert doctors also helped to increase happiness quotients of the workplace. In another study, **Malee Geounuppakul et al** investigated workplace happiness of nurses and found that they had a medium level of happiness. Factors that influenced happiness in personnel were age, work experience, income, family relation, administrative policy, work characteristics, work-life balance, the relationship at the workplace, belief, professional progress and recognition, morale, the environment at the workplace and welfare. Predictable factors that influence happiness were work characteristic, the relationship at the workplace, and the environment in the workplace, family relation and work-life balance. In this study, it had been found that older nursing staffs were happier than younger. Employees with higher education, income and experience were happier than any other group. **Syed Shakir Ali Ghazali (2007)** pointed that doctors working at Bahawal- Victoria Hospital / Quaid-e-Azam Medical College were not satisfied with their income level, with the present service structure and with the career prospects. Designation and working environment were the factors with which doctors' were satisfied. Due to the need of suitable service structure and low salaries, most of the doctors in all ranks and with different qualifications were dissatisfied with their job. **Sirinthorn Saisoonthorn et.al (2014)** while studying the workplace happiness of Thai employees, who worked at GlaxoSmithKline found that human resource

planning, training and development and compensation and benefits programme had a positive impact on happiness. On the other hand, occupational health and safety of employees did not matter for happiness.

Studies in Indian context by **Mr. Rajnish Ratna et.al (2011)** on the level of Job Happiness Quotient (JHQ) of private and public banks' officers in Delhi proved that the JHQ level in the private sector banks was higher than those in public sector and identified that sense of accomplishment, ambition, working hours, stressful work environment, age, and compensation had an impact on the job happiness. **Dr. Ritika Jain (2012)** surveyed the executive's job Happiness Quotient in the realm of Rajasthan State Mines & Minerals. The survey covered various issues that were relevant to the organization, some of which required management intervention and some of which related directly to the workgroup. The factors included company, leadership, job, reward & recognition, communication, teamwork, training and development, physical environment, social environment, job security and advancement, goal, improvement orientation, compensation, grievance redressal and conflict resolution. Her findings revealed that Executives of Mining, Mechanical, Research, Material, P&A were happy. Executives of Mining were happiest of all. Executives of Finance, Beneficiation & Electrical Department were overall unhappy. Based on her analysis she suggested that to increase the executive's happiness level, actions should be taken for up gradation and renovation of flats and quarters allotment and construction of new flats. More doctors & nurses should be appointed in the hospital and better provisions should be made to improve housekeeping, water coolers, air conditioner, urinals, and washrooms and also attention should be paid to provide improved quality of food items and fresh and hot meals in the canteen. There should be transparency in the reward system and revisit current reward and recognition system for improvement.

Darly S. Famacion-Quinco (2012) researched on workplace happiness of La Salle University administrators. The study involved the members of the President's operations council of La Salle University for Academic Year 2010-2011. Results showed that 50 percent of the administrators of La Salle University were happy at work. They were mostly of women in the age range of 30-39 years old who were

tenured and secured with their job status. The greatest factor that affected the level of happiness of the administrators was the belief that they were doing something worthwhile and the least that affected their happiness was competitive salary. **Martin (2008)** also found that people felt happy when they pursued meaningful activities. **Dimitrov (2012)** stated that employees might be happy to do their work when they perceived significance and meaning of work.

Studies indicated that social support from colleagues and supervisors (**Iverson, Olekalns, & Erwin, 1998**), favorable evaluations by a superior (**Cropanzano & Wright, 1999**), helping fellow workers (**George, 1991**) in the workplace causes a person to be happy. **Phathara-on Wesarat et.al. (2015)** in their review found that people value friendship at the workplace as essential to their work life. Employees with positive friendship and happiness at the workplace were less likely to leave their jobs (**Mao, Hsieh, & Chen, 2012**). Many studies showed the linkage between interpersonal relationship and happiness (**Demir & Davidson, 2013; Søraker, 2012; Westaway, Olorunju, & Rai, 2007**). Positive friendship not only influenced the happiness of employees but also affected productivity (**Bader et al., 2013**) and friendship groups were more committed to their work and direct to higher productivity. **D. & Krueger, A.B. (in Kahneman 2006)** studied happiness of nine hundred working women in Texas, at the time of interaction with different people throughout the day. They were the very happy when interacting with their friends and the interaction with bosses made them unhappy. Even being, alone made them happier than intervening with the boss. The co-workers' companionship gave them modest happiness. Employees with meaningful friendship were happier than those who were unaccompanied. Though, **Mao and Hsieh (2012)** argued that employees with different work levels may differ in friendship anticipation. Higher-level employees had a lower expectation for friendship at work (**Mao & Hsieh, 2012**). Thus, employees working different work levels could differ in the happiness of friendship.

The research had found a significant impact of leadership behaviors on job satisfaction and workplace happiness and 95% of the variance in happiness at the workplace could be directly attributed to the characteristics of the leader. Hence the importance of leadership to an organization could not be ignored. Research showed

that people needed feedback and comments on their work especially from a leader and wanted to be valued and respected in the working environment. Appreciation by leader was translated into feelings, either positive or negative, that became the main part of an employee's happiness at the workplace (**Sharon S. Andrew, 2011**).

Monetary incentives could not always make the employee happy, rather appreciation/ admiration, a pat on the back; recognizing in public the labors put in by the employee or simple facial gestures of acknowledgement that performed as an important role in boosting the morale of an employee and making employees happy, which, in turn, doubled the power of an employee to do his/or her job efficiently and competently (**Xanthopoulou et al in V. Gupta, 2012**). Dr. Noelle Nelson, a clinical psychologist in her book, —Make More Money by Making Your Employees Happy, showed that effective appreciation of employee value return more than triple time on equity and assets than the firms that don't. Organizations globally, therefore, focusing on making their employees happy. **Dr. Nelson**, in her book also stated that when employees felt that the company took care of their interest; the employees would also care for company's interests. This might result in putting extra efforts for the betterment of the company. There was a direct relationship between happiness at work, and engagement, which meant how much people care about the success of the organization, and how much they felt that individual put into their organization's success. Fair treatment by management and good communication system in the organization would increase employee's happiness which in turn motivated them to provide extra effort. Unhappy or least happy employee cared less about the achievement of the organization (**Sharon S. Andrew, 2011**). The management should trust the employees and gave more autonomy. In a Danish factory, it had been found that within two years time, the employee's absence rate decreased by fifty percent and the production rate increased by sixty percent when the employees were given much more autonomy and authority than before (**Ojanen, 2009 in Suojanen Ilona, 2012**). According to **Romero and Cruthirds (2006)**, humor had an enormous impact on workgroups and organizations. Teamwork and communication were significant for employees' happiness but at the same time, a comfortable working environment without superfluous barriers might help to back teamwork, to minimize

stress and to decrease any type tension (**Ilona Suojanen ,2012**). The research by **Gavin and Mason** (2004) showed that employee education training had an influence on happiness and employee commitment. Employee participation in decision-making had the possibility to add to greater happiness (**Chris Barker and Brian Martin, 2011**).

The relationship between age and happiness was found to be U-shaped (**Clark & Oswald, 1994; Gerdtham & Johannesson, 2001**). Review of **Sharon S. Andrew (2011)** showed that 85% of employees at the age of fifty-five plus reached the highest level of happiness, this might be that at this age they reached the highest level of their career. The Employers' Forum on Age (EFA, 2005) found that people at sixties and the under 25's were the happiest at work. Those who were least happy were employees in their 40's. At this age, early years' happiness falls drastically (**Oswald, Andrew, and Blanchflower, David 2009**). Findings from the study of **David Sirota** revealed that an employee joined an organization with a high level of happiness but with the passage of time this happiness level gradually declined. Senior employees were least happy than junior employees.

Gender differences in happiness were due to gender inequality in the society and individual resources like education and income reduced the gender differences in happiness (**Clemens Tesch-Ro"mer et.al.2008**). Though there were very few women in an executive position of the organizations, they were more satisfied than men at work. **Sharon S. Andrew, (2011)** reported that eighty-two percent of women and seventy- eight percent of men were happy at work. **Blanchflower and Oswald (2011)** in their review also found that women were happier than men, age was not affecting happiness. In addition, education was found to have a U-shaped relationship with the probability of being happy. Relative income played an important role as a predictor of happiness. Self-employed were significantly more satisfied with their work.

On studying happiness of employed and unemployed persons **Di Tella et. al. (2001)** discovered that the self-proclaimed happiness of unemployed persons was much lower than employed persons. Self-employed people were to a large extent happier with their work than the employed. The reasons for this were not the

differences in material resources, lower working hours and personality. Self-employed persons were happier because they enjoyed the greater autonomy of the work. So they were competent to choose tasks they found more motivating and were also capable to weight their diversity. Employed and self-employed people had different work processes that might have an impact on their happiness level. People were happier with lower pay and longer working hours but with higher autonomy (**Matthias Benz and Bruno S. Frey, 2004**). This analysis viewed work activities as one of the contents of the happiness.

To the people, work was very important and the value of work adds happiness. Work was highly respected, but the people who did not appreciate work were happier than those who highly appreciated (**Ilona Suojanen, 2012**). People got the kinds of work tasks that were matched with their interests (**Porfeli & Mortimer, 2010**). The individuals' interests could be apprehensive with the meaning of work (**Michaelson, 2011**). Some people were perhaps happy to follow the meaningful work (**Grady & McCarthy, 2008, in Phathara-on Wesarat et.al. 2015**). People had a need to be appreciated. Therefore low-status job made employees unhappy (**Kahneman & Krueger, 2006**).

Eileen Trzcinski & Elke Holst (2013) reported that unemployed men were dissatisfied and men in leadership positions had the highest level of subjective life satisfaction. They observed no statistically significant differences among women in high-level managerial positions, women who worked in low positions, and women who specialized in household production, with no employment. Merely women who were unemployed reported lower levels of life satisfaction, compared with women in other employment.

Part-time employees were happier than a full-time employee and there was little difference between the level of happiness of private and public sector employees (**Sharon S. Andrew, 2011**). Andrew pointed that people working in a small organization were the happiest than in bigger organization. People were happy when they had stable employment (**Scherer, 2009**). Permanent employees seemed to be more satisfied with their jobs than temporary employees (**Ong & Shah, 2012; Scherer, 2009, in Phathara-on Wesarat et.al. 2015**).

At work, women were more satisfied and happy, although incomes of women were lower than average and they did get less other reimbursement compared to men (Warr, 2007). It indicated that salary was not all about happiness. **Helliwell and Huang (2011)** gave an explanation of these women valuing jobs with lower pay, but better flexibility with working arrangements (Warr 2007, in **Iloa Suojanen et.al. (2012)**). A higher income had a significantly positive but only slight effect on happiness (Frey and Stutzer, 2000). Happiness was more about moment-to-moment experiences than a steady state such as a high salary (Killingsworth, 2012). The salary was not the best motivator; work itself should give meaning, and encourage us to try our best (Wikipedia.org).

Study on income and happiness showed that there was a strong relationship between these two variables. Income meant wages and salary earned by individuals. Salary was an important factor in the matter of career choice. It matters, to some more than to others. People value themselves and others according to salary. (D. **Kahneman, 2010**). People also compared own income with others (Lembregts & Pandelaere, 2014; Oshio & Kobayashi, 2011). How much an individual earned that did not stimulate happiness, but how much earned compared to others. People were likely to be happy when they perceived income equality (De Prycker, 2010) and less happy when experienced income inequality (Oshio and Kobayashi, 2011). **Phathara-on Wesarat et.al. , 2015**) in their review observed that income inequality could positively influence the happiness of some competitive people who gain more income than others (Hopkins, 2008). This was because competitive people tried to make the difference between their own and others' rewards. They might be happy with higher income even if it was unequal to those people (Hopkins, 2008). It seemed that people earning higher income were happier but their happiness level affected by longer working hours (Binswanger, 2006; Paul & Guilbert, 2013). People in the job with long working hours were unsatisfied (Georgellis, Lange, & Tabvuma, 2012).

2.2 Studies Related to the Relationship between Personality and Happiness

Happiness has been the subject of interest for many centuries, from most primitive Greek philosophy, post-enlightenment Western-European ethical philosophy to current quality-of-life and well-being research in social, political and economic sciences (worldhappiness.report). Today, happiness as a thought seems to be readily embraced by the mass of people and appears to be more esteemed than the chase of money, moral uprightness or going to heaven. In theory, the term happiness is normally used interchangeably with the word subjective well-being, life satisfaction and quality of life. It consists of two components—cognitive and affective. Ulrich **Schimmack et al (2002)** explained the two terms as- “the affective component is an individual’s (real or apparent) hedonic balance (i.e., the balance between pleasant affect and unpleasant affect) and the cognitive component is an individual’s life satisfaction (i.e., evaluations of one’s life according to subjectively determined standards)”. Both the components of happiness have been strongly influenced by personality factors. (**Diener and Lucas in Ulrich Schimmack et. al, 2002**).

Eysenck (1983) noted that happiness was a thing called stable extraversion. If easy sociability and pleasant interaction with other people made a positive effect on happiness then it only made sense that happiness could be associated with extraversion. Similarly, if worries and anxieties made up negative effect in happiness, it could easily be seen that unsteadiness and neuroticism were also related to unhappiness

DeNeve, Kristina M., Cooper, Harris (1998) in their meta-analysis studied the influence of one hundred thirty -seven personality traits on subjective well-being. Personality was found to be a predictor of happiness, life satisfaction, and positive affect, but significantly less predictive of negative affect. The most closely associated traits were: repressive-defensiveness, trust emotional stability, the locus of control, hardiness, positive affectivity, self-esteem, and leisure .When personality traits were grouped according to the Big Five factors, neuroticism was found the strongest predictor of negative affect ,happiness and ,life satisfaction, They noticed that positive affect was predicted well equally by extraversion and agreeableness.

Kenneth O. Doyle and Seounmi Youn (2000) investigated self-reported happiness across a fourfold personality framework that synthesizes psychoanalytic and psychometric approaches to personality structure. Following survey approach data were collected from a representative sample of an adult population of the USA. Four personality types were acknowledged to embed in two basic dimensions- Extraversion/Introversion and Tendermindedness/Toughmindedness. They discovered that in general extraverts were happier than introverts, and tender-mindeds were happier than tough-minded. In particular similarities and differences across personality types in the implication of happiness with respect to good eating habits, financial insecurity, anxiety and tension, financial optimism and health concerns.

Lyubomirsky (2001) in her work established that variables mood and temperamental traits (extraversion and neuroticism), social relationships, purpose in life, and global life satisfaction were strongly correlated with happiness.

Ulrich Schimmack et al (2002) examined the relationship between personality and cultural factors in the prediction of the cognitive /life satisfaction and the affective/hedonic balance components of subjective well-being (SWB). They predicted that the relation between hedonic balance and life satisfaction was moderated by culture. The influence of personality on life satisfaction was mediated by hedonic balance and also moderated by culture. Extraversion and Neuroticism, in all cultures, influenced hedonic balance to the same degree. In individualistic cultures society hedonic balance acted as a stronger predictor of life satisfaction than in collectivistic cultures. The influence of Extraversion and Neuroticism on life satisfaction was largely mediated by hedonic balance. The results proposed that the influence of personality on the emotional component of Subjective Well-being (SWB) was pan- cultural, whereas the influence of personality on the cognitive component of SWB was moderated by culture.

Ulrich Schimmack et al (2003) in their article stated that extraversion and neuroticism of the Big Five were the strongest predictors of life satisfaction. By conducting four studies the authors assessed the contribution of the facet of extraversion and neuroticism to life satisfaction. The positive emotions/cheerfulness facet of extraversion and depression facet of neuroticism was the strongest and most

dependable predictors of life satisfaction. These two facets frequently accounted for more variance in life satisfaction than neuroticism and extraversion. The findings suggested that measures of positive emotions/c and depression were necessary and sufficient to predict life satisfaction from personality traits.

The work of **Jose' Luis Gonza'lez Gutie'rrez (2005)** examined the association between the big five personality dimensions, demographic factors -sex, age and relationship status, and subjective well-being among nursing professionals. Regression analysis showed personality traits Extraversion and Neuroticism were the significant predictors of subjective well-being. There was a positive association between openness to experience and the positive and negative components of effect. The demographic variables -sex, age, and relationship status were found to be differentially associated with the different elements of subjective well-being. The explanation for associations was found in the links between demographic variables and personality.

LUO LU and CHIA-HSIN HU (2005) explored the relationships between leisure involvement, leisure satisfaction, personality and happiness in Chinese university students. Findings of the study showed that extraversion significantly correlated with almost all kinds of leisure involvement, but neuroticism did not correlate with leisure activities at all. Extraversion significantly positively correlated with leisure satisfaction and neuroticism significantly negatively correlated with leisure satisfaction. Extraversion and neuroticism were significant predictors of happiness; leisure satisfaction had its incremental effects after those of personality traits and other area satisfaction were controlled

Eliseo Chico Librán (2006) conducted a study to determine the size of the relation between subjective well-being and its components and the personality traits. Subjective well-being was associated with extraversion and neuroticism, and neuroticism was generally considered the more important. With the help of, the Satisfaction with Life Scale and the Positive and Negative Affect Scale and revised Eysenck Personality Questionnaire data were collected from students of the University of Rovira i Virgili. The result of regression analysis revealed that personality traits neuroticism correlated with subjective well-being and neuroticism

accounted the variance of subjective well-being. Extraversion explained the only nominal percentage of variance in subjective well being. He concluded by raising doubts that extraversion being the main trait that influences subjective well-being, and supports the viewpoint that neuroticism-emotional stability was the dimension that was consistently associated with the three components - subjective well-being, satisfaction with life, and affective balance.

Adrian Furnham and Irene Christoforou (2007) in their paper determined the dimensional structure of ratings of Morris' happiness types by using the Morris Multiple Happiness Inventory. The study also re-examined the predictable trait of happiness as measured by the Oxford Happiness Index (OHI) and EI (Emotional Intelligence) and personality. It also examined the degree to which the factors that emerged from Morris' happiness types predicted overall happiness as considered by the OHI and the effect of demographic variables in predicting happiness. The study hypothesized that Extraversion and Neuroticism would be, respectively, positively and negatively correlated with happiness and trait EI would be a positive predictor of happiness. Taking into account Morris' happiness types, it was hypothesized that precise individual difference variables (Extraversion, trait EI, religiousness, Neuroticism) would be predictive of different happiness situation or motivations (Sensation seeking, Interpersonal happiness, Spiritual happiness, and Negative happiness). It was confirmed that Neuroticism was not a significant predictor of Negative happiness. The results indicated that in predicting overall happiness influenced of another factor like religiousness could not be ignored. High trait EI and extraversion were the most happiness type proposed by Morris which predicts overall happiness.

Alexander Weiss et al (2008) examined whether personality and subjective well-being share a common genetic structure. To test the hypothesis they collected data from 973 twins by using subjective well-being questions and Midlife Development Inventory. The results revealed that subjective well-being was genetically indistinguishable from personality traits, particularly in traits like emotional stability (low Neuroticism), social and physical activity (high Extraversion), and constriction (high Conscientiousness). These findings indicated that

subjective well-being was linked to personality by common genes and that personality might form an “affective reserve” pertinent to set-point maintenance and changes in set point over time.

Piers Steel, Joseph et al (2008) found that Subjective well-being (SWB) / happiness was a fundamental human concern and its area spans from management to mental health. The authors evaluated personality and SWB (e.g., life satisfaction). Results of multivariate analysis showed that different personality and SWB scales could be substantively unrelated and the relationship was normally much larger than what previous meta-analyses had indicated. Total variance in SWB could vary from 39% to 63% which was accounted for by personality traits.

U. Schimmack et al (2008) established that besides personality traits, two dimensions of subjective well-being - affective well-being (AWB) and cognitive well-being (CWB) were influenced by other factors. In Germany, they noticed that neuroticism was a stronger predictor of AWB than CWB. In the East and West of Germany unemployment and regional differences were stronger predictors of CWB than AWB. In addition, the study confirmed shared evaluative biases in personality and subjective well-being ratings inflated estimates of the effect size of personality. After controlling for this bias, the effects of unemployment and regional differences on CWB were stronger than the effects of personality trait neuroticism. The results exhibited that AWB and CWB were a discrete component of SWB and that research findings for one component might not take an extensive view of the other component. The results raised vital questions about valuing the two components in the conception of subjective social indicators.

Sharon Grant, Janice Langan-Fox, and Jeromy Anglim (2009) assessed the relationship between subjective well-being, psychological well-being and big five traits of men and women. Results indicated that personality traits were strongly related to psychological well-being. The relationship between personality traits and subjective well-being was not as strong as the relationship between personality traits and psychological well-being. Extraversion, neuroticism, and conscientiousness correlated with subjective and psychological well-being. This finding expressed that these traits represent personality predispositions for general well-being.

Barry R. Schlenker et al (2011) cited that political conservatives were happier than liberals. They proposed that gap in happiness research was accounted for by particular attitude and personality differences related to positive change and mental health. The results of the study expressed that conservatives had greater personal control and responsibility, more positive outlook -optimism, self-worth; more transcendent moral beliefs - greater religiosity, greater moral clarity, less tolerance of transgressions, and a generalized belief in fairness. Liberals and conservatives differ in how they define fairness, the former believed in promoting equality and the latter equity.

The purpose of **Mansoor Momeni et al (2011)** research was to study the relationship between personality variables and happiness among the students of University of Tehran. In this analytical research happiness was dependent variable and personality traits were independent variables. To elucidate the associations among the research constructs, structural equation modeling was used to examine the model fit and research hypotheses. Results demonstrated that extraversion, agreeableness, and conscientiousness impacts positively on happiness, though neuroticism and openness impact negatively on happiness.

Research of **Leslie J Francis et al (2011)** was designed to assess, among adolescents in England whether concern for others happiness influenced individual's happiness. By using Eysenck's three-dimensional model of personality it also tested the theory that concern for the happiness of others occupies a different psychological space from the space occupied by personal happiness. The data showed a high level of concern for the happiness of others. Eighty-four percent adolescents reported that happiness of other people was important for them. High levels of personal happiness were generally associated with low neuroticism and high extraversion (stable extraversion). The data confirmed high levels of concern for the happiness of others tend to be related to high neuroticism, high extraversion, high social compliance, and low psychoticism.

A research was conducted by **Nooshin Pishva et al (2011)** to study the relationships between happiness and personality of medical science participant. With the help of Eysenck personality Questionnaire (EPQ) and the Oxford Happiness

Questionnaire data were collected and regression method was used to analyze data. Results showed there was a positive direct relation between extraversion and happiness; and a negative direct relation between neuroticism and psychoticism with happiness. No firm casual inference was drawn by the researchers. Results indicated that the personality provides the context in which happiness operates.

Seddigheh Bahiraei et al (2012) described the relationship between personality aspect and happiness among students of Tehran University. In this research Big-five and MBTI were used to measure students' personality and Oxford's happiness questionnaire was administered to measure the happiness of Tehran University in five training groups namely Laws, Management, Theology, Arab literature/language and Philosophy. The results pointed out that there was a considerable relationship between all personality facet and happiness. Extraversion followed by neuroticism had the highest correlation with happiness. The results of regression analysis showed that about forty-five percent variance in happiness were predicted by personality dimensions. Neuroticism, extraversion, conscientiousness, feeling and judicative traits were good predictors of students' happiness. However, variables agreeableness, openness, and sensationism did not show any substantial relationship with the dependent variable. The students who were considered more successful in their education were less happy than other students. There was no significant difference between male and female students' happiness level.

Stephen M. Schueller¹ (2012) conducted two studies to investigate whether introverts and extraverts benefited differentially from specific positive psychology interventions. For study one participant completed Brief Big Five Inventory, Satisfaction with Life Scale, Positive and Negative Affect Schedule, Authentic Happiness Inventory and Center for Epidemiologic Studies Depression Scale and for study two filled Big Five Inventory for personality and other measures were the same as study one. It contained different interventions such as three good things, gratitude visit, savoring, signature strength, and active-constructive responding etc. Finding of study one revealed that extraverts benefited more from the gratitude visit and savoring exercises, whereas introverts benefited more from the active constructive responding, signature strength, and three good things exercises. No differential effectiveness was

found in study two for the interventions. Results from study one were replicated as the gratitude visit in person was more beneficial for extroverts than introverts. Pooling the participants who completed the gratitude visit in person across the two studies into a single statistical test showed that the gratitude visit was more beneficial for extroverts than introverts. These studies provided support for the notion that introverts and extroverts might benefit from pursuing different strategies to promote happiness.

Marzihe Malekiha et al (2012) was conducted a correlation study between personality, self-esteem, happiness, and depression among boys student of high school. Results of MBTI, Rosenberg Self-Esteem Scale, Beck Depression Inventory, and Oxford Happiness Inventory showed that there was no significant correlation between demographic variable and happiness and depression. It was found that parental status, mother employment, and economic status had no impact on happiness and depressions of students. The findings also revealed, there was the significant relationship between personality traits (extraversion and intuition), happiness and depression; and there was the significant relation between self-esteem, happiness, and depression. The study concluded that there was no theory to indicate that happiness leads to self-esteem and the mechanism by which self-esteem influences human mental health, as well as self-reported happiness, remains unclear.

The purpose of **Greg Huszchoa and Megan Endres (2013)** study was to investigate the individual and joint effects of gender and personality on the choice of happiness strategies. The results of MBTI test showed females with feeling preferences expressing significantly higher use of happiness strategies than males with thinking preferences. Females with thinking preferences and males with feeling preferences showed few important differences from other types.

Oscar N.E. Kjell et al (2013), addressed the need to further contextualize research on well-being in terms of cross-cultural aspects of personality traits among adolescents. They examined happiness/ subjective well-being (life satisfaction, positive and negative affect) and psychological well-being (positive relations with others, environmental mastery, self- acceptance, autonomy, personal growth, and life purpose) and personality traits of Iranian and Swedish adolescents. Findings revealed that Swedish reported higher subjective and psychological well-being, while Iranians

reported a higher degree of agreeableness, openness, and conscientiousness. Neuroticism and extraversion did not differ between cultures. Neuroticism was related to well-being within both cultures. Openness was related to well-being only among Iranians, and Extraversion only among Swedes. A mediation analysis within the Swedish sample demonstrated that psychological well-being mediated the relationship between neuroticism and subjective well-being as well as between extraversion and subjective well-being. The results gave an indication on how psychological well-being might mediate the relationship between certain personality traits and subjective well-being. In general, the intricacy of the results illustrated the need for more research on contextualizing of well-being research.

In his study **Christopher J. Soto, (2014)** examined longitudinal relations of the Big Five personality traits with subjective well-being(life satisfaction, positive affect, and negative affect) of Australian residents .Results indicated that the degree of subjective well-being was associated with higher levels of extraversion, agreeableness, and conscientiousness, and with lower levels of neuroticism. Furthermore, changes in well-being predicted by personality traits and well-being predicted change in personality traits. Due to traits effects, well-being level increased among the individuals who were at first extraverted, agreeable, conscientious, and emotionally stable. The effects of well-being showed that individuals with high initial levels of well-being subsequently became more agreeable, conscientious, emotionally stable, and introverted. These results did not support the common assumption that associations of personality traits with subjective well-being were completely due to trait influences on well-being. The present study viewed that personality traits and well-being aspects reciprocally influenced each other over time.

2.3 Studies Related to Multiple Intelligences

Many universities and companies tried to choose the most competent students or employees from thousands of applicants (**Furnham 2002; Van der Berg and Feij 1993 in Adrian Furnham et al, 2007**). **Goleman Daniel (2007, in Juvy G. Mojares, 2015)** stated that One's success in a preferred profession depends on his skills and abilities and the most important elements of success were intelligence, determination,

toughness, and vision.

Theory of multiple intelligences was a well-thought-out improvement in both teaching and learning because it helped students to develop all the multiple intelligence (MI) domains. The theory was a reflection to signify ways in which individuals comprehend and perceive the world, solve problems and learn. Likewise, by focusing on the problem-solving activities, teachers, by implementing the theory of multiple intelligences promoted students not only to build-up their accessible knowledge but also found out new content and skills (**Nataša Bakić-Mirić, 2010**).

A study was done by **Hironaka-Juteau, J.H. (2006)** to recognize the impact of a lesson designed on the basis of MI theory on therapeutic recreation undergraduate students. Respondent's responses suggested that learning from MI viewpoint showed a greater student awareness of themselves and others, helped in students' attentiveness and focus, and resulted in a greater enjoyment of hands-on activities. **Ellen C. Katzowitz (2002)** investigated the learning styles and multiple intelligences of students in postsecondary allied health fields of six different diploma programs. The report of the statistical analyses revealed that Medical Assisting students' scored highest in interpersonal, intrapersonal, and naturalistic. This student groups' lowest scores were in musical, kinesthetic, and spatial domains. Practical Nursing students' had highest scores in linguistic, interpersonal, and intrapersonal and lowest in musical, kinesthetic, and naturalistic. The differences between the highest scores and the lowest scores were useful in representing apparent differences in growth of specific intelligence. Linguistic, interpersonal, and intrapersonal were the intelligence domains where Radiology students' scored highest and their lowest scores area were kinesthetic, spatial, and naturalistic. Respiratory Therapy students' were highly intelligent in interpersonal, intrapersonal, and naturalistic and had weak intelligence in musical, kinesthetic, and spatial domains. Sonography students' three highest and lowest domains of intelligence were interpersonal, intrapersonal, naturalistic and musical, kinesthetic, and spatial respectively. On the other hand, Vascular Technology students' highest mean scores were in linguistic, interpersonal intelligence, and intrapersonal with interpersonal having the highest. The lowest mean scores were in musical, spatial and naturalistic intelligence. Interpersonal intelligence was reported

as the highest scores in all groups. People working in the allied health field had much in touch with the public, and these fields were measured people service-oriented fields. Five out of the six groups had low scores in musical, kinesthetic, and spatial intelligence. Linguistic intelligence was required in the six programs and the careers for which students were ready to be employed strain effectual verbal and written communication in training for dealing with patients.

Nataša Bakić-Mirić (2010) studied the implementation of multiple intelligences theory in teaching the English language to pharmacy students at the University of Niš Medical School and discovered that MI theory had a positive impact on learning English language and to increase students' attention in language learning. This theory offered a greater appreciation of student's strengths.

A study was conducted by **Maryam Ansari et.al. (2014)**, to identify the MI profiles of medical and non-medical students. The results of descriptive-survey showed that medical, human sciences and basic sciences students could be differentiated in terms of Gardner's intelligences. According to the obtain data best predictors for medical students were naturalist and interpersonal intelligence factors and existentialist, intrapersonal intelligence factors for human science, and logical-mathematical intelligence for basic science. There was no significant difference observed between multiple intelligences of male and female students of the medical and non-medical group.

Today the physicians had to play a diversified role which needed increased knowledge about the relationship between conscious and unconscious learning and memory (psychologytoday.com). Study results of **Rani Kanthan, M.D. and Sheryl Mills, M.Ed** on medical students revealed that the strategies taken by the teacher were similar with the preferred intelligence of 1/3 students of the class. Linguistic intelligence, logical-mathematical intelligence, spatial intelligence and interpersonal intelligence were partially present among students and other forms of multiple intelligences such as bodily-kinesthetic intelligence, musical intelligence, and intrapersonal intelligence were not presented in these students. Examination of the data revealed that up to one-third of the students showed a preference for the former group of intelligence. It might be that this group of students was dissatisfied from the

technique of learning. In their academic performance, there was no overall difference observed, but the insight of this information was useful to the instructor in attempting to redesign instruction for the next group.

Discussion of **M. Pearson (2014)** highlighted the contribution of MI theory and practice to raise the curative association, to supporting a culture of client feedback, to enhancing counselor flexibility, and in general efficiency of therapy. The therapeutic alliance had been shown to put in considerably to positive outcomes from counseling. Latest research highlighted the positive impact from modifying treatment in response to client needs and interests. Understanding clients' special intelligence enhances counselors' capability to modify treatment. Pearson argued that by applying MI theory and practice counselors and their clients could experience increases in the therapeutic alliance, in feedback and the effectiveness of the therapeutic process, presented in the form of expressive therapies.

Multiple Intelligences (MI) at the Workplace

As society changes, so do the complication of a work environment. The workplace is an interactive atmosphere. Combining intelligence with each other, **H. Gardner (2006)** distinguished; the analytical challenge was to lessen the possible combinations to a manageable number. The key was not to measure a particular intelligence but to think about the overall configuration of, and relations among, all intelligence (**J.Karim 2011**). Almost in every occupation, one had several responsibilities that touch on different types of intelligence (Morris 2004).Evaluating Jobs from the MI point of view was truly stimulating because many conventional job-profiles did not differentiate the “real” job. The use of multiple intelligences theory in a workplace would increase creativity and productivity, by enabling workers to use their strengths (**Freund and Piotrowski 2003, in Robert J. Freund, 2004**). **Martin (2001 in Robert J. Freund, 2004)** twisted Howard Gardner’s multiple intelligence theory into user-friendly tools. Her work provided a total method for investigation of staff requirements, matching applicants to jobs, and supervising and training efficiently. The findings allowed the detection of individual skills and revealing the variety of skills wanted for multi-skilling, multi-tasking, and efficient teamwork.

Gardner's Multiple Intelligences theory could turn into one of the most complex troubles to resolve, that meant the question of the management of intellectual capital (Martin 2001, in **Robert J. Freund, 2004**). **Riggio, R. E. & Reichard, R.J. (2008)** found that application of multiple intelligences in the workplace might help leaders to use human capital more effectively. This was because job role variety and responsibilities were different across employment spectrums.

According to **H. Gardner (2006)**, the workplace called for different intellectual strengths, intelligence profiles, and intellectual relations to coworkers. It was supposed that the theory of multiple intelligences was a feasible answer to attract and retain very talented and skilled individuals, be it leaders or non-leaders and offers concrete approaches to improve human intelligence, and individualized learning that would add to organizational success (**Stefanie D. Wilson and Bahaudin G. Mujtaba**).

Li-Yueh Lee (2010) investigated under what conditions multiple intelligences could magnify the effects of various intelligences to the success of expatriation. The study revealed that the exercise of multiple intelligences was dependent upon expatriates' obligation toward the organization, social support, functional interaction, and assignment term.

The majority of organizational theorists had the same view that having intelligent managers was one of the most significant contributors to overall organizational success and task or mission could not be accomplished by not paying attention to manager's intelligence (**Narges Sariolghalam and Mohammad Reza Noruzi ,2010**). A manager with high in MI was the "executive" of organizational intelligence. These managers must set up and support norms, roles, and system for well-organized application to identified tasks, but must also be responsive and open to adjusting by employing sensitivity, problem- solving and decision- making strategies that permit for adjustment (**Chemers 2001, Mohammad Reza Noruzi , 2011**). The top -performing managers and leaders had notably more "multiple intelligences competencies" than other managers and poor social. Multiple Iintelligences were strong predictors of executive and management "derailment" and failure in a person's career (**Mohammad Reza Noruzi, 2010**). There was a dearth of study that had

examined the role of individual abilities or intelligence in influencing managerial competencies (**Abdul Kadir Othaman et.al, 2010**). Therefore he attempted to shed light and understanding on the influence of MI on an individual's managerial competencies. Results of regression analysis showed that kinesthetic, spatial, Linguistic and interpersonal intelligence domains were the important predictors of managerial competencies. This suggested that individuals with these intelligence domains likely to be a competent manager who might contribute to the success of the organization.

In his work Timothy A. Judge et. al. (2004) ,on the relationship between MI and the leadership found that affective measures of intelligence showed stronger correlations with leadership than as measured by paper and pencil test of intelligence. Intelligence correlated equally sound with objective and affective measures of leadership. Furthermore, the leader's stress level and the leader's defectiveness moderated the relationship between the intelligence and leadership. Study of Bullock, Jonathan (2008) revealed that transactional leadership behaviors being significantly influenced by linguistic intelligence. The management-by-exception: an active component of transactional leadership verified an important, negative correlation with linguistic intelligence representing that as a leader's linguistic intelligence increases, their use of management-by-exception: active likely decreases. On the whole, the study acknowledged a significant, positive relationship between transformational leadership behaviors and interpersonal intelligence and intrapersonal intelligence. Also, it found logical-mathematical, visual- spatial, linguistic, or bodily-kinesthetic intelligence domains would not influence transformational leadership behaviors .This study concluded that the stronger a leader's capacities in interpersonal intelligence and intrapersonal intelligence the more transformational their leadership behaviors, and so the more efficient their leadership. Ghamrawi, Norma (2013) also investigated the relationship between the leadership styles and multiple intelligences profiles of Lebanese public school principals. Results indicated that principal had a transformational leadership style. Existential intelligence was the strongest predictor of transformational leadership. Almost 50% variation of transformational leadership was predicted by Existential, verbal and Interpersonal intelligence domains. The

majority of school principals enjoyed Visual-spatial intelligence; followed equally by logical-mathematical and existential intelligence profiles; then also equally by interpersonal and verbal-linguistic intelligence; followed by musical, intrapersonal, kinesthetic, and naturalist intelligence. Significant positive correlations were found between leadership and existential, verbal and interpersonal intelligence.

While studying the relationship between multiple intelligences and changing leadership style among heads of Alborz medical university departments- Elyasi, **M. M. et al (2014)** found that there was a significant relationship between leadership style and multiple intelligences. Research results indicated that there was a significant relationship between multiple intelligences (body, musical, and interpersonal intelligence) with changing leadership style. There was a positive significant relationship between musical and interpersonal intelligence with ideal penetration. Furthermore, a relationship exists between visual, body, verbal, logical, musical, and interpersonal intelligence with inspirational motive. There was also a positive correlation between scholarly motivation with visual, body, verbal, logical, and musical intelligence, and between visual and logical intelligence with principals' individual considerations. The quantitative research of **Stefanie D. Wilson and Bahaudin G. Mujtaba** discovered and identified the degree of relationships between the multiple intelligence domains: linguistic intelligence, intrapersonal intelligence, interpersonal intelligence, and leadership. They also examined the relationship between biographical characteristics such as, gender, age, and ethnicity with leadership among higher education faculty in the United States. The study findings showed that linguistic, visual/spatial, interpersonal, and intrapersonal intelligence were dominant among more than fifty percent leader and for non-leaders top domains of intelligence was same as a leader except for linguistic intelligence.

Robert J. Freund (2004) first time showed the social and economic dimensions of the individualization. The starting point for Mass Customization was the inclination for individualism and with the help of MI theory; an attempt had been made to answer whether the MI theory could help Mass Customization. In the education sector, the knowledge of Multiple Intelligences theory could contribute to a more successful accomplishment of Mass Customization. The entrepreneur could

attain a superior fit of the routine characteristics to the individual if it would be possible to identify the customers MI profile. This, in turn, helps a supplier of products or services to differentiation advantage towards the competition. At the companies, the organization, the co-workers and the technology, Mass Customization and Personalization was highly required. To master in technology was not enough to have success with Mass Customization. MI theory helps to built better company learning and transformation processes and to acquire better potential of the co-workers. In this way, a more substantial contribution to the economic success could be made.

Qader Vazifeh Damirchi et.al. (2011) carried out their work to examine the relationship between multiple intelligences and productivity of Cultural Institutions workers in Moghan. This descriptive and analytical study discovered that there was a relationship between multiple intelligences and productivity of Cultural Institutions workers in Moghan.

Based on Howard Gardner's theory of multiple intelligences the quantitative, non-experimental research study of **Gale, La Tonya Y (2012)** examined the degree of relationship between the domains of multiple intelligences and the job function of managers in sales, human resources (HR), and engineering. The results of the survey showed that sales, HR, and engineering managers scored high on interpersonal, intrapersonal, and logical-mathematical intelligence, which Gardner stated were crucial for leaders. The results were used to provide a deeper and broader understanding of multiple intelligences and the impact it could have on leadership selection, training, and development.

In another study, **Chua Yan Piaw et al. (2014)** examined the prediction ability of multiple intelligences of the Malaysian school leaders on their work motivation, communication skills, creativity, curriculum management skill and co-curriculum management skill. Results of multiple linear regression analysis revealed that verbal-linguistic, logical-mathematical, interpersonal and intrapersonal predicted work motivation, interpersonal and verbal-linguistic predicted communication skill and verbal-linguistic, visual-spatial, musical-rhythmic, intrapersonal and bodily-kinesthetic predicted creativity. In addition, the eight multiple intelligence domains

were significant predictors for co-curriculum management and logical-mathematical, interpersonal, verbal-linguistic, intrapersonal and naturalistic were the predictors for curriculum management skill.

In 2013, **Dr. R. Senathiraja and M.D. Fernando** carried out a study with the objective to determine the relationship between Howard Gardner's Theory of Multiple Intelligences (1987) and Team Development of Sri Lankan IT industry's professional. Also, the study aimed to recognize the IT employees multiply intelligent profiles. The results of correlation, regression analysis and one sample t- test revealed that respondents had a high level of intelligence in mathematical, spatial, interpersonal and naturalistic intelligence domains. The results revealed a positive and significant relation between MI and team development, which meant that intelligence levels of IT employees played a critical role in their day to day work.

The study of **Erkan T. Demirel et al. (2011)** examined the impact of MI on entrepreneurial ideas. This quantitative study collected data from small and medium-size enterprises owners of Turkey. One sample t- test, correlation test, and regression test results showed that MI ability of entrepreneurs had a significant decisive impact on their entrepreneurial ideas.

Section 2.4: Studies Related to Locus of Control and Happiness.

There was a direct relationship between internal locus of control and happiness (**Argyle and Myers**). Lu also reported the significant relationship between happiness and internal locus of control (**Lindiwe M. Sindane, 2011**).

Usha Kulshrestha and Chandrani Sen (2006) designed their study to investigate the subjective well-being in relation to emotional intelligence and locus of control among executives. Using Emotional Quotient test, Rotter's Social Reaction inventory, Bradburn's Positive and Negative affect scale, Andrews and withey's life satisfaction scale they established that emotional intelligence and locus of control had significantly related with subjective well-being. High emotional intelligence and internal locus of control scored significantly high on positive affect and scored significantly low on negative affect. Alexandra Stocks et.al. (2012) explored the differences in locus of control and subjective well-being in China and Southern Africa

and also tested how demographic variables related to subjective well-being and locus of control. Their work supported the view that individual of different regions had a different locus of control and subjective well-being profiles and different demographic variables affecting each region differently. China showed a significant negative correlation between subjective well-being and locus of control and Southern Africa showed no significant correlation. Results too point out that gender had a significant relationship with locus of control in Southern Africa but not in China. China had a strong association between subjective well-being and gender.

Paul E. Spector et.al. (2002) studied among twenty-four geopolitical entities' manager's relation with work locus of control, job satisfaction, psychological and physical strain, and individualism/collectivism. They found that effects of perceived control on well-being were universal and relations of work locus of control with well-being at work were similar in almost all the studied areas. In addition, the individualism/collectivism level did not moderate the magnitude of correlations of work locus of control with measures of well-being. The results revealed that control beliefs contribute to well-being universally but how control was manifested could still differ.

Kurt A. April et.al. (2012) in their search of the academic literature found that individual with internal locus of control had good leadership quality. In their investigation of the impact of locus of control on happiness, they discovered that individuals with a balanced locus of control expectancy i.e. a mix of internal and external locus of control could achieve maximum happiness.

Omoniyi, Mary Banke Iyabo and Dr. Adelowo, Abiola Iranade discovered the relationship between emotional intelligence, locus of control, and subjective happiness among widows. Their descriptive research revealed that majority of the respondents had external locus of control, low level of emotional intelligence and low subjective happiness. The study also found that there was a positive relationship between emotional intelligence, locus of control and subjective happiness

The research of **Lindiwe M. Sindane (2011)** presented a quantitative review of the relationship between happiness, creativity, and locus of control; and also personality, age, and emotional intelligence for both employed and unemployed.

Findings revealed that the relationship between happiness and locus of control was weak and the relationship between creativity and locus of control was not significant. Big five personality extraversion interrelated with happiness whereas neuroticism was not. No significant difference between groups on locus of control was observed. There was a positive significant relationship between trait emotional intelligence and happiness.

Hassan Fahim Devin et.al. (2012) examined the relationship between locus of control and happiness among pre-elementary teachers in the city of Mashhad. By applying Oxford's happiness inventory and Rotter's Loc scale to collect data they found a significant negative relationship between the study variables. Furthermore, regarding locus of control and happiness, a significant difference was observed among teachers with different educational background.

The objective of **Seyede Golafrouz Ramezani and Abbas Gholtash (2015)** research was to investigate the relationship between happiness, self-control, and locus of control. They used the Oxford Happiness Inventory, self-control scale of [Nikmanesh] and Rotter's Locus of Control to collect data from students. The results of multiple regression showed that happiness was positively and significantly related to self-control. Furthermore, self-control was the strongest predictor of happiness.

Section 2.5: Studies Related to the Relationship between Emotional Intelligence and Happiness.

There was a direct relationship between emotional intelligence and happiness (**Sharon S. Andrew, 2011**). **Adrian Furnham and Irene Christoforou (2007)** found that extraversion and emotional intelligence were positive predictors of happiness. Neuroticism was not a significant predictor of Negative happiness of Greek Cypriots who were the residences of South Cyprus. **Tomas Chamorro-Premuzic et al. (2007)** analyzed the relationship between big five personalities, trait emotional intelligence, and happiness of students and nonstudents. Stability, extraversion, conscientiousness, and agreeableness, four traits of big five were positively correlated with happiness and trait emotional intelligence. In addition, results of path analysis showed that the Big Five traits and happiness would be fully mediated by emotional intelligence trait.

Casey, Philip (2009) examined the link between emotional intelligence, happiness, and well-being. Emotional intelligence was related to happiness but not with well-being and well-being correlated with happiness. Components of emotional intelligence was not associated with well-being but except emotion management (others) and trait empathy all facets of emotional intelligence related with happiness. It was evident in the study that emotional intelligence was a good predictor of happiness and intrapersonal emotional intelligence was more significant to happiness than interpersonal emotional intelligence.

Mallika Dasgupta (2010) studied among female IT Professionals how emotional intelligence influenced in controlling role conflict and improving quality of work life and happiness. Her research findings indicated that emotional intelligence had a significant influence on all study variables. A positive correlation was found with a quality of work life and happiness which indicated that to achieve a quality of work life and perceived happiness emotional intelligence played a great role. Work-family conflict and family work conflict negatively related with emotional intelligence it meant that it controls the perception of role conflict and reduced the stress.

The research of **Meetu Khosla and Vandana Dokania (2010)** investigated the impact of happiness on experienced affect, emotion regulation and emotional intelligence among graduate students of Delhi. Two-way ANOVA results revealed that compared to unhappy individual, happy individual showed significantly greater positive affect and emotional intelligence. Happy men and women were more emotionally intelligent than unhappy men and women. Emotional intelligence was a significant predictor of happiness.

Sasanpour M. et. al (2012) tried to find the relationship between emotional intelligence, happiness and mental health among medical science students of Isfahan University. They found that emotional intelligence positively related with happiness and mental health. Students with high emotional intelligence were happier and mentally healthy.

Anne De Kok (2013) in his/her thesis explored and described the relationship between emotional intelligence, job satisfaction and job self-efficacy among South

Africans. Findings indicated that relationship between job satisfaction and trait emotional intelligence was statistically insignificant. The relation between job self-efficacy and emotional intelligence was statistically significant. No possible interaction effect was observed between job satisfaction and job self-efficacy.

Dr. Malik Roshan Ara 's (2013) study intended to find out whether happiness would be forecasted by emotional intelligence of students. Findings exposed that emotional intelligence was significantly correlated to happiness as well as all the components emotional intelligence i.e., Self-awareness, Self-regulation, Motivation, Social-awareness and Social-skill and overall emotional intelligence. Happy individuals were able to control their emotions better and manage their impulses; also, happiness increased the degree of Self-awareness, Self-regulation, Motivation, Social-awareness, and Social- skills. Females were emotionally more intelligent and were inclined more intimate in a relationship than men.

The objective **D. Ruiz-Aranda et al. (2013)** study was to find the relationship between emotional intelligence and well-being indicators (life satisfaction and happiness) and the influence of perceived stress on the relationship between emotional intelligence and well-being of health science female students. Findings of the research revealed that happy individual had higher emotional intelligence score, less perceived stress and higher levels of life satisfaction. The results indicated that perceived stress mediated the relationship between emotional intelligence and well-being indicators, in particular, life satisfaction and happiness. These results suggested, nursing students by increasing emotional intelligence would able to reduce perceived stress and to increase happiness.

Jafar Bahadori Khosroshahi et.al. (2013) in their descriptive study examined the relationship between personality traits, emotional intelligence, and feeling of happiness among students of Tabriz University. A positive significant relation was reported between happiness and big five traits - extroversion, openness, agreeableness, and conscientiousness and the negative significant relation between happiness and neuroticism. Further, the findings showed a significant positive relationship between happiness and emotional intelligence and also it revealed that personality traits and emotional intelligence forecasted happiness, significantly in

students.

Maria Platsidou (2013) tested among high school students and university students that emotional intelligence and its facets were good predictors of happiness. Results of path analysis established that specific emotional intelligence dimensions predict happiness in a distinct way. Vigor and personal efficacy were predicted by Appraisal of emotions. Positive affect, enjoyment, fun and also life satisfaction were predicted by both Optimism/mood regulation and social ability. Social interest was predicted by social ability. In addition, happiness components were indirectly predicted by the lower-level emotional intelligence dimensions via the higher-level emotional intelligence dimensions they affect. Developing emotional intelligence training programme happiness level would be enhanced.

Farzaneh Khordzanganeh et al (2014) examined the relationship between emotional intelligence, happiness, and resiliency with the mental health of Ramhormoz city high school students. The findings revealed that there was a significant correlation between emotional intelligence, happiness, and resiliency with mental health and resiliency was the stronger predictor of mental health than happiness and emotional intelligence.

Iraj Mirkhan et.al. (2014) investigated among female teachers of Urmia city the forecast of life satisfaction based on emotional intelligence, happiness and religious attitudes. The study outcome exhibited that there was a positive association between emotional intelligence and life satisfaction and happiness also positively linked to life satisfaction; however, there was no relationship observed between religious attitude and life satisfaction. Happiness was the single predictor of life satisfaction.

The purpose of **Nasser Bai and Seyed Mohammad Niazi (2014)** research was to investigate the relationship between emotional intelligence and happiness of students of the athletic university. The results showed that emotional intelligence and its facets (Social skills, Self-awareness, Unanimity, Self-control, and Self-motivation) positively related to happiness. Analysis of stepwise regression showed that emotional intelligence subscales (self-regulation, empathy and social skills) played an important role in predicting happiness.

Section 2.6: Studies Related to the Link between Stress and Happiness

In India, **Arvind Kumar Shukla (2013)** explored the relationship between job stress and the employee happiness at work. The sources of job stress that had been investigated in this study include role ambiguity, role conflict, job complexity, task variety and management role. The study population included of all nursing staff working in different private sectors hospitals in Gorakhpur district. The findings revealed that job stress had a significant negative relationship with employ happiness at work. He stated role ambiguity, role conflict; job complexity, task variety and the management role had a significant negative impact on the happiness level of nurses. It was also noticed that 'role conflict' affects the nursing staff the most out of all the stressors that had been studied. In the context of job stress and happiness role ambiguity, Job complexity and management role played an important role. The research suggested that the management should clearly communicate to the employees its goals and strategies, employees should be appreciated for their individual role towards work and management should provide modern technologies for efficient and effective work. To check unnecessary job stress training, work orientation of newly recruited staff, stress management workshops and grievances handling should be implemented. Work brought self-respect and happiness to the individual; at the same time it also created stress and unhappiness (**Layard in Ricardo Blaug et.al.**)

Using Gallup World Poll data **Weiting Ng et.al. (2008)** tried to give the concept of perceived stress. They found that at the nation level stress positively related with well-being and wealth; and there was the inverse relation between negative affect and wealth and income. At individual level stress had weak negative relation with well-being than negative effect. The meaning of stress differs at the national level and individual level. Stress was a negative marker of affective well-being at the national level and for the letter, it showed a reflection of lifestyle differences which strongly associated with wealth and weakly related with affective and cognitive well-being. Both positive and negative conditions could create stress and could have a positive affect.

Masume Azizi (2012) in correlation study tried to establish a relationship

between happiness and stress coping strategies among students. Results of t-test and correlation statistics; which was calculated from the data collected from 198 male and 168 female students revealed that positive significant relation exist between happiness and effective coping style. Life satisfaction, positive mood, health, efficiency and self-esteem and happiness significantly related with inefficient coping style.

Keith A. King et.al (2014) investigated that students with low perceived stress had a higher level of stress and low emotional closeness with others. Most of the students had a high-stress level and they applied less stress management strategies. School and lack of time were the factors of stress among them. Students' perceived stress differed significantly based on perceived emotional closeness to important others (social support). It meant that who reported low perceived stress also reported higher emotional closeness to others.

Asım Çivitci (2015), on the relationship between perceived social support and stress in college students, examined the moderator roles of positive and negative affect. Results of hierarchical multiple regression analysis revealed that negative affect had a moderator role in the relationship between perceived social support and stress, and positive affect did not show similar function. Consequently, as negative affect increased, the positive effect of social support on perceived stress decreased.

The aim of the cross-sectional study of **Moljord et.al.(2011)** was to investigate the associations between physical activity, stress, and happiness, as well as possible sex and age differences in these variables among students. There was no significant difference on stress and happiness between those being physically less active and more active. Girls had higher stress level and degree of happiness was high among boys. According to age stress level differs. It was high among younger student than an older student, but when looking at happiness and physical activity there were no significant differences between the different age groups. A statistically significant two-way interaction of sex by age was found on both stress and happiness.

Carol Graham and Julia Ruiz Pozuelo (2016) described the relationship between age, happiness, and stress at a country level. In 44 countries, out of 46, they found U shape relationship between happiness and age. With stress, the relationship was reversed U shape in many countries. The most important result was that time of

turning varies depending on average country-level happiness and on individuals' position in the well-being distribution

The study of Abdollahi et.al. (2014) examined the role of hardiness as a mediator between perceived stress and happiness. The research reported that hardiness partially mediated between perceived stress and happiness among nurses. Nurses who had a low level of perceived stress normally experienced greater hardiness and happiness and, nurses with a high level of hardiness reported a higher level of happiness. They found hardiness as a protector against perceived stress and a happiness promoting factor in nurses.

Abdollah Omid et.al (2011) investigated the connection between happiness, perceived stress and academic achievement of medical sciences students. They reported that female and younger students were happier and the students who felt stress in a normal situation and test time were not very happy. Happiness was positively related to academic achievement and there was a negative relationship between stress and academic achievement.

Enthem Duygulu et.al (2013) explored the effect of role stress on the occupational well-being among pharmaceutical employees and obtained that each occupational well-being dimension had a significant correlation with role stress dimensions. Intra sender conflict negatively correlated with professional self-acceptance and there was also a negative significant relation between managerial ambiguity and occupational growth.

The study of **Holly H. Schiffrin and S. Katherine Nelson (2010)** reported an insignificant inverse linear correlation between happiness and perceived stress.

Section 2.7: Studies Related to the Relationship between Stress and Emotional Intelligence

Nina Oginska-Bulik (2005) explored effects of emotional intelligence on occupational stress in human service workers. Results showed that employees with higher emotional intelligence perceived a lower level of stress and suffered less from negative health consequences. Ability to manage emotion assisted employees in coping with occupational stress in the workplace and training of stress management

would help in this direction.

Hassan Darvish and Ali Akbar Nasrollahi (2011) explored and described the relationship between emotional intelligence and occupational stress and examined the influence of these variables on the job performance of employees who worked in the center of Payame Noor University organization. A significant relationship was reported between components of emotional intelligence and emotional stress, demonstrating that others' emotions and feelings were related positively with emotional intelligence and role overload component of stress was also significantly related to stress. Effective management of emotional intelligence could play a vital role in reducing occupational stress.

According to Hassan Jorfi et.al. (2011) communication effectiveness was a crucial factor for organization's performance and growth, and plays an important role in stress management, and job satisfaction of today's competitive organizations. They investigated that communication effectiveness could moderate the link between stress management with job satisfaction. The study sample consists of educational administration and Agriculture Bank of Iran. Findings revealed that stress management of emotional intelligence had a positive relationship with communication effectiveness and also communication effectiveness played a key role in job satisfaction.

The purpose of **Zeynep Kalyoncu et. al. (2012)** study was to investigate the relationship between the emotional intelligence and work stress of private and Government hospital nurses' of Ankara province. They observed that relation between emotional intelligence and job stress was statistically significant. An individual with a higher emotional intelligence level had a lower level of job stress. In addition, no significant differences reported between the emotional intelligence and the stress levels of the nurses according to their genders. Marriage, age, education, and experience had a positive relationship with emotional intelligence and stress was negatively related to education and wage.

Mohammadbagher Gorji and Narges Moghim (2012) found out the relationship between factors of job stressors and emotional intelligence of nurses and compared them in emergency and hospitalize sections in our country The results of

the statistic analysis showed that there was a meaningful relationship between stressors and emotional intelligence of nurses in emergency departments and no such, a relationship was observed in the inpatient center.

Logendran Mayuran (2013) examined the impact of emotional intelligence on the stress of school teacher and bank staff. The study revealed that components of emotional intelligence were a significant determinant of stress management of school teachers. The weak positive relation was found between emotional intelligence and stress of bank staff. The ability of stress management of school teachers and bank staff was moderate.

In their cross-sectional study **Maryam Khaniyan et.al. (2013)** established the relationship between emotional intelligence and occupational stress of Tehran training hospital rehabilitation staffs. They reported that the relationship between emotional intelligence, components of emotional intelligence and occupational stress were negative and significant. Two-components of emotional intelligence understanding others' emotions and social skills could be the predictors of occupational stress.

Deepa Mohan and Sudarsan N (2014) reported very weak relationship between emotional intelligence and organizational role stress among employees of IT sector. Finding of **Semih Soran et.al (2014)** exhibited that job stress and emotional intelligence meaningfully correlated with performance. Further, emotional intelligence had a mediating effect on the relationship between job stress and performance of banking employees of small-medium enterprises in Turkey.

DR. R. Krishnakumar and S. Lalitha (2014) stated that there was a link between emotional intelligence and occupational stress. Emotional intelligence helped to understand work environment in a better way which in turn help to reduce occupational stress. They tried to find this link with the respondent who worked in publishing and digital solutions located in Pondicherry, South India. Their study exposed that there was a positive relationship between emotional intelligence and occupational stress.

Reshu Agarwal and Pradeep Sharma (2015) reported that workplace environment of colleges had become highly stressed. To cope with stress personnel worked there need certain special competencies to manage their effectiveness. In this

direction, they examined the relation between faculty effectiveness, occupational stress, and emotional intelligence and found that by increasing emotional intelligence one was able to reduce his/her stress level and to increase their work efficiency.

Section 2.8 Studies Related to the Relationship between Stress and Locus of Control

Jessica Goyzman found that locus of control and stress had no significant effect on students' academic performance. Among undergraduate students, the buffering support of stress was observed in internal and not in external (**Irwin N Sandler and Brain Lakey; 1982**)

Angela C. Roddenberry (2007) assessed among college students the mediating effects of self-efficacy and locus of control in the relationship between stress, psychological and physical symptoms, and to see the utilization of health services. Findings revealed that stress was positively correlated with symptoms. There was a significant positive relationship between stress and external locus of control and the negative relation was noticed between self-efficacy and stress. School principals who had internal locus of control had the highest score of stress management and this score was low in case of external principals. There was a statistically significant difference in stress management scores on the basis of locus of control type (**Peter Onyango Ogolla et. al., 2016**). Stress, emotional intelligence, and locus of control were predictors of work satisfaction of academician (**Steliana Rizeanu, 2016**). Vasiliki Brouskeli and **Angelos Markos (2013)** reported unemployed with external Loc in Greek in the age group 20 to 64 experienced more stress.

The research observed a weak, positive insignificant correlation between locus of control and professional life stress in people (www.123HelpMe.com). Kobasa 1979 reported that managers who experienced high stressful events and remain healthy were internals. Internals experienced less stress (**Kenneth R Brousseau and Mark A Mallinger' 1981**). **Pilisuk and Montgomery (1993)** reported that external locus of control was related to a greater number of stress-related somatic symptoms than internal locus of control. An external was significantly related to higher stress scores and lower achievement orientation. Higher achievement orientation was positively

associated with the use of active coping styles. Male was more internally oriented in terms of locus of control than female (**Douglas S. Mulbury, 1995**)

The study of **Rajiv Kumar Jha and Bushara Ra Bano (2012)** showed that the Indian employees had a high level of job stress. Employees with internal Loc were less stressed in their jobs and more satisfied with the organization at the same time external employees were high on stress and not satisfied with their jobs. The findings of **Jui-Chen Chen and Colin Silverthorne (2008)** stated that to predict job satisfaction, stress and performance in Taiwan account firm Loc play a vital role. Individuals who had a high level of internal Loc also had higher levels of job performance, satisfaction and low level of stress. **A.P. Singh and Nitu Singh (2014)** discovered that Loc moderated the relationship between general health and negative life even, the stress of managerial personnel of different private sector organizations in India.

Roohangiz Karimi and Farhad Alipour (2011) suggested locus of control can be used as an important tool to decrease job stress and to increase job satisfaction. For this, it was important to develop promotion system and sense of self-esteem, and increasing high salary and quality of life.

2.9 Conclusion

In the last several decades a good number of research works have been done on subjective –well- being /happiness and its determinants and, on its relation to personality, intelligence and stress. In integrating research findings of these studies very little effort has been made.

In public sector organization, it is claimed that humanity and motivation encourage employees to serve society and it is significantly related to employee's workplace happiness (**Jamshed Adil Halepota, 2011**). Though, workplace happiness of public sector employees and its relation to personality, intelligence and stress are inconclusive and demand more investigation that forecast workplace happiness in public sector. There is a dearth of study in public sector and expect an exploration of work attributes of happiness and relation between personality, intelligence, stress and happiness.

After the review of the available relevant literatures, this research work intends to analyze the relationship between personality types, intelligence and workplace happiness of medical professionals in West Bengal. This study will employ two instruments at a time to find the happiness level of an individual, in previous studies, such type of work have not been found. In India in public sector work setting, especially on health sector's employees' very little literature is available. In the view of this fact, an attempt has been made in this study to provide some knowledge on workplace happiness of medical doctors and its relation with personality, intelligence, and stress.

Chapter-Three

Theoretical Analysis and Methodology

This chapter is divided into two sections. First section deals with the theoretical analysis. Section two discusses the conceptual model developed in the present study and describes the process to be followed to collect and analyze the data for research which contains research hypotheses, respondents, research design, and tools used to collect data and procedure of data analysis.

Section- one : Theoretical Analysis

3.1 Theoretical Analysis

This part contains an analysis of the important concepts to be worked within this study. These concepts present a framework for the present study.

3.1.1 Happiness at work

Everybody searches for happiness in every culture (Aydin, 2012; Fisher, 2010). In psychology, happiness is known as "subjective well-being" (SWB). "The term SWB refers to peoples' evaluations of their life including cognitive judgments such as life satisfaction; and affective evaluations (mood and emotion), such as positive and negative emotional feeling' (Continuing Psychological Education Inc, 2006)." An individual's subjective well-being (Angner, Hullett, & Allison, 2011; Jiang, Lu, & Sato, 2012) or happiness is related to life satisfaction, which is closely related to job satisfaction (van Praag, Romanov, & Ferrer-i-Carbonell, 2010). Job satisfaction affects life satisfaction. At the same time life satisfaction affects satisfaction (Saari & Judge, 2004 in Phathara-on Wesarat et al, 2015). In this sense workplace happiness means life satisfaction or SWB at the workplace (Bhattacharjee & Bhattacharjee 2010, Carleton, 2009 in Phathara-on Wesarat et al, 2015).

Phathara-on Wesarat et.al. stated that happiness at the workplace refers to how satisfied people are with their work and lives. Hence, work/job has become one of the important aspects of peoples' happiness. We spend more than half of the time at work (Wikipedia). From, work we derive income, pleasure and also identity. We work not only for salary, but also there are incredibly different aspects of work which can either provide us great satisfaction or make us very unhappy. Happiness at work is a feeling

of an individual and also community. It arises from work when all the imaginable aspects find their places in a right order. Happiness is a personal experience and it is very important for individual. Myer and Diener defined workplace happiness as the experience of many positive affects, infrequent negative affects and an overall sense of satisfaction with life as a whole. Pryce-Jones defines happiness at work as "a mindset which allows maximizing performance and achieving potential". In a different definition, Kjerulf A. defines happiness at work as "a feeling of happiness resulting from work". Varila and Viholainen (Suojanen, Ilona, 2012) explained that work satisfaction is the manifestation of happiness at work. Happiness at work creates work satisfaction, work motivation and other positive reactions linked to work.

Happiness associated constructs in organizational investigation differ from a number of consequential ways. In this research, happiness has been defined as satisfaction derived from work attributes, work motivation and other positive feelings derived from work (S Lyubomirsky - 2011). The term happiness at work, job happiness and happiness are used interchangeably for the purpose of study.

Happiness has been the subject of study since the beginning of the writing of history. Over the years Philosophers, Sociologists, Economists, Psychologists, Lawyers and many Academicians have worked on it and as a result of their efforts yielded many appealing theories of happiness (P.Brey, 2012). Some well-known theories available in the literature are - Hedonism theory, Life satisfaction theory, Affective state theory, The sentiment satisfaction theory, Authentic Happiness theory, Davis's theory of happiness, Desire theory, Set point theory, Rising expectation theory and much more. A short description of psychologist set point theory is presented because this study followed the view of this theory. Till date set point theory is leading in psychology and it assumes that an individual has a predetermined set point in the region of which happiness level vary. This set point is mostly inborn and measured by genetic factors and personality. An individual may at first react in response to changes in real life circumstances or the happening of major life events, but effects are simply temporary. After some times, people will 'adapt' new situation. The primary boost or cut in happiness occurred by this new circumstances ultimately declines and is replaced by impartial feelings. 'Adaptation' so means to a decrease of

the happiness-effects formerly evoked by changed life circumstances and events with the passage of time. Peoples' happiness ultimately slips back to their set point level because of this adaptation procedure. The thought of biologically determined set point refers to that happiness levels will remain constant over time. (Frederick & Loewenstein, 1999 in Werk, gezin en geluk,2011).

3. 1.2 Concept of Personality

The word 'personality' originates from the Latin word "Persona" meaning mask (Hurlock, 1978). Personality issue is generally explored by the psychologists, which is viewed as a pattern of behavioral, temperamental, emotional, and mental traits of a person. It is what collectively comprises a unique individual"(Joyceline Chow & Indraneel Sircar,2008). Allport (1974) viewed personality as "a dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment". Robbins (2001) described personality as "the sum total of ways in which an individual reacts and interacts with others". According to Saville and Holdsworth (1999) " personality refers to a person's typical or preferred way of behaving, thinking and feeling". Personality is usually defined as referring to those internal properties of a person that leads to characteristic patterns of behavior"(Sarah E. Hampson and Andrew M. Colman, 1995).

Hereditary (genetic), environmental factors and situational conditions are the three factors which formed a personality, that motivates and guides human behavior (Murphy, 2008; Robbins, Odendaal & Roodt, 2003). Trait psychology and type psychology represent two incredibly unusual approaches to personality (Naomi L. Quenk, 1993).

'Personality traits are characteristics exhibited in a large number of situations and is used to describe peoples' behavior in different situations "(Robbins et al., 2003). Traits differentiate people from other and moderately stable and enduring aspects of individuals (Martin, 2005). On the other hand, Personality type refers to a grouping of different personality traits and preferences (Myers, 1998). According to Jung, personality types are the mental functions concerned in gathering information and making decisions on the basis of this information, and differences in behavior

result from peoples' inborn tendencies to use their minds in different ways. According to McCaule (1998) when people act on these tendencies, they build up predictable patterns of behavior. Bayne (2004) concluded that systematic differences in individual's way of perceiving things/events and drawing a conclusion; results distinction in individual's interests, reactions, skills, values, and motivations. (RONÉL NIENABER).

For the present research, personality is defined as a person's preferred way of thinking, feeling and behaving.

Theory of MBTI

In Hippocrate's period, personality was alienated into four groups based on the supremacy of one of four temperaments including sanguine, choleric, melancholic and phlegmatic. The dominance of each temperament results in precise features (Wikipedia). There are several schools of thought which try to give explanation or measure of individual differences. Some of the well-known theories are: Psychoanalytic theories (such as Freud's theory); Neo-psychoanalytic theories /neo-Freudtheories (such as Karl Young theory, Myers-Briggs' theory of stylistic, Alfred Adler's theory); Type theories(Hippocrates, Galien, Kerchmer and Sheldon's theories);Factor analysis theories/ trait theories(Cattle, Aizne's theory, five element theory of Mccray and Cousta) and Humanism theories (Abraham Mazlo and Carl Rajerz's theory) (Abolfazal Gandomi et al.,2012) .

It is beyond the scope of the proposed research to illustrate in details the theories and models of personality. A brief overview of the Myers-Briggs Theory (MBTI) that is applied to the current study is presented.

The Swiss psychiatrist Carl Jung explained in detail the logical ways in which people were different. He elucidated individual personality differences based on opposing dichotomies in function and attitude. Function comprised a person's favored style to gather information and the style in which they made decisions. Jung thought attitude included how an individual accumulated energy and carry on a role in how individuals would use their functions (Jung in Juanita Jane Cohen, 2008). Jung illustrated uniform characteristics between psychological functions and the effect of

an introverted or extroverted attitude on these functions. Jung's work has been used as one of the bases of the rising field of personality theory and is principal for the development of the MBTI. The MBTI, developed in the early 1950's by Katherine Cook Briggs and Isabel Briggs Myers, was intended to make Jung's theory more explicit and practical in its use to peoples' everyday lives and workplace (capt.org and Wikipedia.org).

Jung's theory is based on the thought that individuals, in general, have a basic preference for each of a set of functions. Jung's types deal with a preference for how we work, look a circumstance, or use our minds. According to Carl G. Jung's theory of psychological types (Jung-1971), people can be characterized by their preference for general attitude: Extroverted (E) vs. Introverted (I), their preference of one of the two functions of perception: Sensing (S) vs. Intuition (N), and their preference of one of the two functions of judging: Thinking (T) vs. Feeling (F).(Capt.org,)

The three areas of preferences introduced by Jung are dichotomies (i.e.bi-polar dimensions where each pole represents a different preference). Jung also proposed that in a person one of the four functions above is leading – either a function of perception or a function of judging. Isabel Briggs Myers proposed judging-perceiving relationship as a fourth dichotomy influencing personality type [Briggs Myers, 1980]: Judging (J) vs. Perceiving (P). (Scibd.com) Katherine Cook Briggs and Isabel Briggs felt that the differences in people were of value and that the differences could be measured (Barbuto, Brownfield, in Angela Alexander, 2004).Their personality type theory MBTI is comprised of four personality dichotomies (see annexure-A for description) that indicated the "preferences related to the basic functions of our personalities perform throughout life" (Kroeger & Thuesen, in Juanita Jane Cohen, 2008). The four dimensions of MBTI categorized by Hirsh and Kummerow (1989) as 1. Energizing: from where and how we acquire our energy 2. Attending: When we collect information at that time on what topic we give concentration 3. Deciding: At the time of decision making which method we follow and 4. Living: What type of life we will accept. The second and third categories refer to the mental powers or cognitive dimensions and are often considered the two most important dimensions.

The first and fourth categories refer to attitudes. They describe where we gain our energy and how we deal with the outside world (Archana Tyagi, 200).

Sixteen Personality Types of Myers-Briggs

	<i>Sensing</i>	<i>Sensing</i>	<i>Intuitive</i>	<i>Intuitive</i>	
<i>Introvert</i>	ISTJ	ISFJ	INFJ	INTJ	<i>Judging</i>
<i>Introvert</i>	ISTP	ISFP	INFP	INTP	<i>Perceptive</i>
<i>Extrovert</i>	ESTP	ESFP	ENFP	ENTP	<i>Perceptive</i>
<i>Extrovert</i>	ESTJ	ESFJ	ENFJ	ENTJ	<i>Judging</i>
	<i>Thinking</i>	<i>Feeling</i>	<i>Feeling</i>	<i>Thinking</i>	

Source: Jane M. Moraski, 2002

All promising permutations of preferences in the four bi-polar dimensions give up a four-letter sixteen different psychological types (see annexure-B for descriptions of all sixteen types).Each one represents a distinct combination of the four preferences. There are also a number of preference pairs and hierarchies helpful in predicting and knowing an individual’s behavioral styles, communication skills, and leadership preferences (E a Youngstrom, 2009).

The MBTI measures preferences rather than abilities, even if it is to be anticipated that a preferred and oft-used function will generally be developed to a higher level of skill and ease. No one personality type is regarded as superior, but certain types are anticipated to be more naturally skilled or comfortable in certain contexts or roles (Leonie Tickle, 2009).

Concept of Locus of Control

In psychology, the locus of control is considered as personality aspect. It means perception about the causes of events in an individual’s life (Heidi Chatfield and Allison Wooten; 2012). Phares first used the concept of locus of control and in 1950, Julian Rotter generalized the theory of locus of control and used the term

internal locus of control and external locus of control. He believes that an individual has varying degrees of internality and externality (Soleiman Yahyazadeh Jeloudar and Fatemeh Lotfi-Goodarzi; 2012).

According to Rotter individual with internal locus of control believes that his/her behavior is guided by his/her personal decisions and efforts. On the other hand, individual with external locus of control believes that his/her behavior is guided by fate, luck, or other external circumstances (Heidi Chatfield and Allison Wooten, 2012).

The following table depicts the features of internal and external locus of control:

Internal	External
<ul style="list-style-type: none"> • Usually more curious • Like to follow participative management style • Perform better in the jobs where they can set the pace • Take on those activities which will develop their position • Like to take challenges to control others. • More dynamic in search of information and data relating to their state of affairs. 	<ul style="list-style-type: none"> • Tends to stay in the dissatisfied job for a long period of time. • In automated situation works better • Easily stressed and victimized by illness. • Generally, posses negative outlook. • Not like to try to hard work easily give up. • The social environment has more influence on them. For success and failure in life blame luck, fate, and chance.

Source: Heidi Chatfield and Allison Wooten (2012)

3.1.3 Concept of Intelligence

When we hear the word intelligence, the concept of IQ testing may immediately come to mind. The word ‘intelligence’ is derived from the Latin word ‘intelligere’ which means to understand. Intelligence is frequently referred to our intellectual potential; something we are born with, something that can be calculated and a capacity that is complicated to change (Masoud Ghaffar, 2007). It is the capability of complex thoughts and logic (Ceci, 2001) and includes the skills acquired throughout life. Intelligence refers to a general mental ability to reason, resolve problems, think conceptually, learn and understand new material and profit from past

experience (Detterman, 2005 in Cimermanova I., 2013) .Intelligence is the capacity to learn from experience, using meta cognitive processes to enhance learning, and the ability to adapt to the surrounding environment which may require different adaptations within different social and cultural context (Sternberg, 2003). Intelligence is a mental ability that involves the capability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experiences. It is just not the learning of book, gaining academic skill, or smartness in tests (brainmatri.com). Rather, it reflects a broader and deeper capability for comprehending our surroundings—“catching on,” “making sense” of things, or “figuring out” what to do (Gottfredson, 2004 in Colin G. DeYoung). It is the ability to solve problems, and of creating product according to the value system of national culture. (Gardner, 1983 in Nida Temiz, 2010)

Among the existing definition, the psychometric analysis is the most traditional description of intelligence and this viewed intelligence as a single facet which is usually identified as general intelligence (EA Cocodia,2014). Over the years researchers have worked on it and identified the different components of intelligence.

Theory of Multiple Intelligences

Every society has its own ways of considering an ideal human being, such as the ancient Greeks valued physical capability, rational judgment, and honesty; Romans valued bravery and in China musical skill, drawing and archery (Victor Daniels;1997). The intelligence of person has been valued for many centuries in many western societies. The word “intelligence” has a strong impact on people (Gardener in Maria Do Rozario De Lima Bothelho, 2003). In late nineteen psychologists, Francis Galton developed formal IQ test on the belief that intelligence was inherited and it could be measured. In 1920-1930, Stanford-Binet’s IQ test modified by a French psychologist, Alfred Binet, gained popularity in America to determine learning disability of children. Thereafter many tests such as Wechsler Intelligence Scale, Kaufman Assessment Battery and woodcock - Johnson Psycho-Educational Battery for measuring children’s intelligence are available. Scholastic Assessment Test (SAT) and Achievement Test are created to measure human capabilities.

The IQ test could not predict success in life but able to predict academic achievement as it was designed for that. Traditional IQ test could not measure what intelligence and how intelligence a person is (Gardener in Maria Do Rozario De Lima Bothelho, 2003). Though, over a century IQ tests have been used, psychologists have raised a question about its validity. As a result, other measures of IQ tests have been emerged. One such thought is the theory of multiple intelligences (Howard Gardner) which viewed intelligence as the bio-psychological perspective to acquire information in certain ways, in order to explain problems or fashion products that are esteemed in a culture or community (Christodoulou,2009). It is a psychological theory about the nature of the human mind (Kafanabo, 2006).

Howard Gardner's thought is a move in our traditional thinking which suggests that one's multiple intelligences are as significant as one's capability to the rationale and it categorizes individuals based on their talents, abilities, and preference in various contexts. He believes that all human beings have multiple intelligences that can be nurtured and strengthened or ignored or weakened (springhurts.org).

Among the psychologists and educational community Gardener's MI theory gained substantial interest. The spirit of his theory centered on the hypothesis that there is no single human intelligence; rather, Gardner anticipated human beings have multiple intelligences (wikipedia). When he introduced the MI theory in *Frames of Mind*, Howard Gardner suggested that each individual possesses at least seven (verbal/linguistic, logical/mathematical, visual/spatial, musical, bodily/kinesthetic, interpersonal and intrapersonal) such relatively independent mental abilities or intelligences. Later he added two more MI factors naturalist and spiritual, but due to lack of literal evidence rejected the spiritual intelligence. (Annexure -C gives an overview of this eight comprehensive categories or intelligences).

In his Multiple Intelligences (MI) theory, Gardner extended the possibility of human capability far from a unitary criteria of the IQ test and proposed that intelligence has more to do with the competence for (1) solving problems and (2) fashioning products in a context-rich and naturalistic setting (Clifford E. Tyler et. al.2011).

The intelligence is comparatively self-regulating of each other and they may be associated with higher order functions. Conventional intelligence tests measured only Linguistic, Logical-Mathematical and Visual/Spatial intelligences. There is no scope to measure other bits of intelligence. Gardner gives evidence of his theory by reviewing the various literature relating to human abilities and finding results that are consistent with his theoretical proposal not by experiment or empirical study.(Joyce A. McClellan,2006).

Concept of Emotional Intelligence (EI)

Daniel Goleman's book (1995), Emotional Intelligence: Why it can matter more than IQ popularized the term emotional intelligence among researchers. He stated that emotional intelligence predicts workplace success better than IQ. "Emotional intelligence involves a combination of competencies which allow a person to be aware of to understand and to be in control of their own emotion, to recognize and understand the emotion of others, and to use this knowledge to foster their success and the success of others". Darwin work has the root of emotional intelligence, who stated that for the survival of human being emotional intelligence was necessary (bookbon.com). Salovey & Major in 1990 first gave the formal definition and model of emotional intelligence. At present, there is three (ability model of EI, Trait EI model, and Mixed EI model) models of emotional intelligence which have been widely used by the researchers. The ability model of Salovey & Mayer stated that in emotional nature individual differs in their capabilities to acquire information and their capabilities also vary in relating emotion to a wider cognition. The individual used this ability to manifest certain adaptive behavior (Yvonne Stys and Shelly L. Brown, 2004).

Goleman's (2001) Emotional Intelligence Competencies

	Personal Competence	Social Competence
RECOGNITION	<u>Self-Awareness</u> Emotional Self-Awareness Accurate Self-Assessment Self-Confidence	<u>Social Awareness</u> Empathy Service Orientation Organizational Awareness
REGULATION	<u>Self-Management</u> Self-Control Trustworthiness Conscientiousness Adaptability Achievement Drive Initiative	<u>Relationship Management</u> Developing Others Influence Communication Conflict Management Leadership Change Catalyst Building Bonds Teamwork and Collaboration

Source: Yvonne Stys and Shelley L. Brown (2004)

The trait EI model of Petrides and colleague (2009) assumed that emotional intelligence was a part of personalities and the individual had a number of emotional self-perception and emotional trait (bookbon.com). Daniel Goleman's mixed model of EI is a combination of a set of skills and a variety of competencies. According to Goleman, emotional quotient consists of five dimensions such as knowing one's emotions, managing emotions, motivating oneself, recognizing emotions in others, and handling relationships. He argued that a person with high emotional intelligence was optimistic, motivated and outgoing (Gülten Genç et.al, 2016).

Among the existing emotional intelligence models, Goleman's model is extensively used in analyzing workplace behavior of employees. Five domains of his model are divided into four parts. Two parts are related to personal ability and other two are related to social ability. The above table exhibits abstract of EI model of Goleman and subsequent EI abilities.

3.1.4 Concept of Occupational Stress

Stress, especially occupational one in modern life seems to have been increasing. Stress is the body's reaction that changes the physical, psychological or emotional adjustment or response (Dr, Stefan Ivanko, 2013). Hans Selye first

introduced the concept of stress into the life science in 1936. He defined stress as “The force, pressure, or strain exerted upon a material object or person which resist these forces and attempt to maintain its original state” (in Reshu Agarwal and Pradeep Sharma ,2015). According to McGrath (1976) stress is the perceived inability to cope with environmental demand. At modern age stress is known as an individual experience arises due to pressure or demands on an individual and effects on the individual’s capability to deal or somewhat, his/her awareness of that capability (Richard Blaug et.al). Ram Chandra Rao (1983a, in A.K.Srivastava) stated that the idea of stress was there in ancient time. Pointing the system of ‘Smakhya’ and ‘Yoga’ he noted that the two terms ‘Klesha’ and ‘Dukha’ described the concept and extent of stress. According to him, there are three types of stress--- Personal, Situational and Environmental.

Review of scientific literatures show that there are three approaches - engineering approach, physiological approach, and psychological approach to study the stress. Previous theories of stress used the concept of engineering approach and physiological approach. The present-day stress theories follow the character of psychological approach. In engineering approach stress is taken as the independent variable and considered as a harmful character of the work environment. Stress is termed as physiological effects of a number of unhealthy stimuli in the second approach, which has been known as the psychological approach. In this approach, it is treated as a depended variable. The last approach is known as a psychological approach. This approach supposed that stress occurs when a person interacts with the environment .It is considered in provisions of the cognitive processes and reactions of emotion which strengthen the interactions. Differences in opinion are observed in psychological approach. The interactional and the transactional are the most used among the different thoughts. The interactional model deals with the structural characters of the person’s interface with their work environment and the transactional models deals with the psychological mechanisms supporting that interaction. Transactional models are mainly a cognitive appraisal and coping process.(Tom Cox et.al. ,2000). Occupational stress falls under the third approach.

Occupational/job Stress is a complex relationship between a person and his/her work environment. It refers to the circumstances at which a person's skills and ability do not match with the work demands and requirements, and/or when the employees' needs are not fulfilled by the job environment (Ramirez et al., 1996). Job Stress refers to one's emotional response to the work environment that appears threatening to workers (Gill, Flaschner, & Shachar, 2006 in Hassan Darvish and Ali Akbar Nasrollahi 2011). Organizational psychologists use the term to signify employees' mental state arises due to job situation and combination of job situation perceived as too much and conflicting demands. Copper and Marshall (1976) expressed that "occupational stress means negative environmental factors or stressors associated with a particular job"(A.K. Srivastava, 1990). Work-related/ occupational stress arises when there is a mismatch between individual's ability and resources to meet up the jobs demand (Ricardo Blaug et.al).

A factor of job and psycho-physical environment causes occupational stress. All the sources of occupational stress can be categorized into two broad heads- individual character and work setting variables (see annexure---D).

Section Two : Methodology

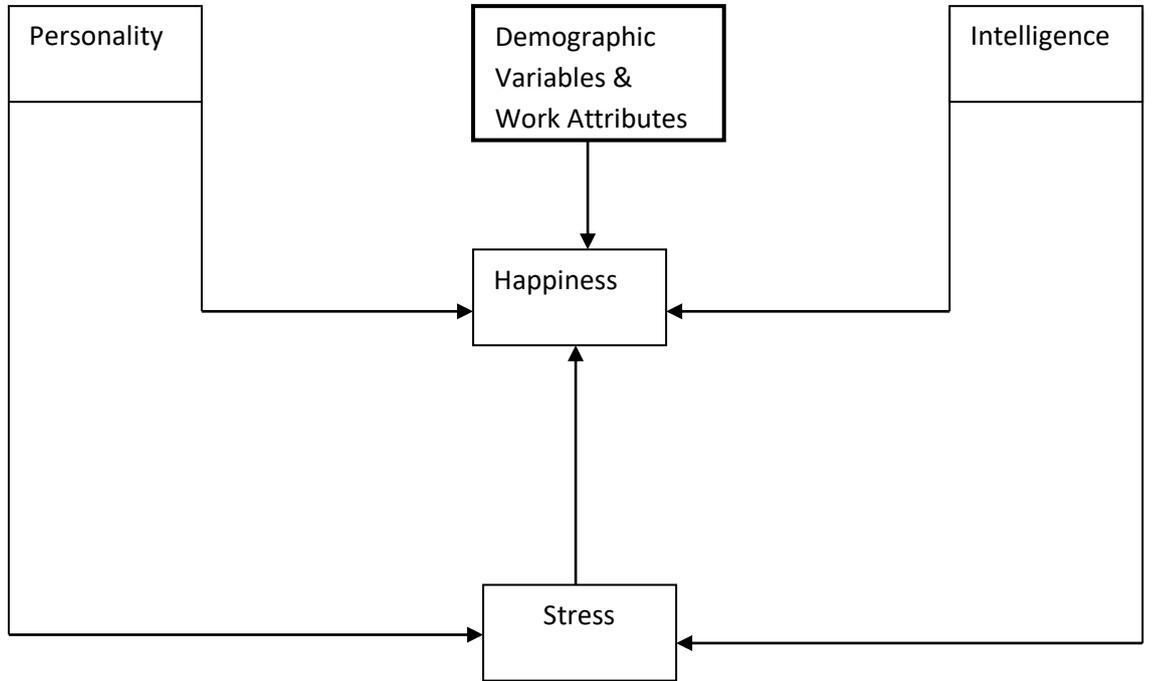
3.2 Conceptual Model

For any research work, a conceptual model on the basis of literature review and theoretical analysis is developed to give the answer to research questions. To analyze the relationship between variables, the planned model took personality and intelligence as the independent variables and workplace happiness as the dependent variable. The findings of researcher showed that some personality traits and intelligence are related to happiness/well being. This empirical research is carried out to demonstrate the relationship between Myers Briggs Type of Indicator, Multiple Intelligences and Workplace Happiness.

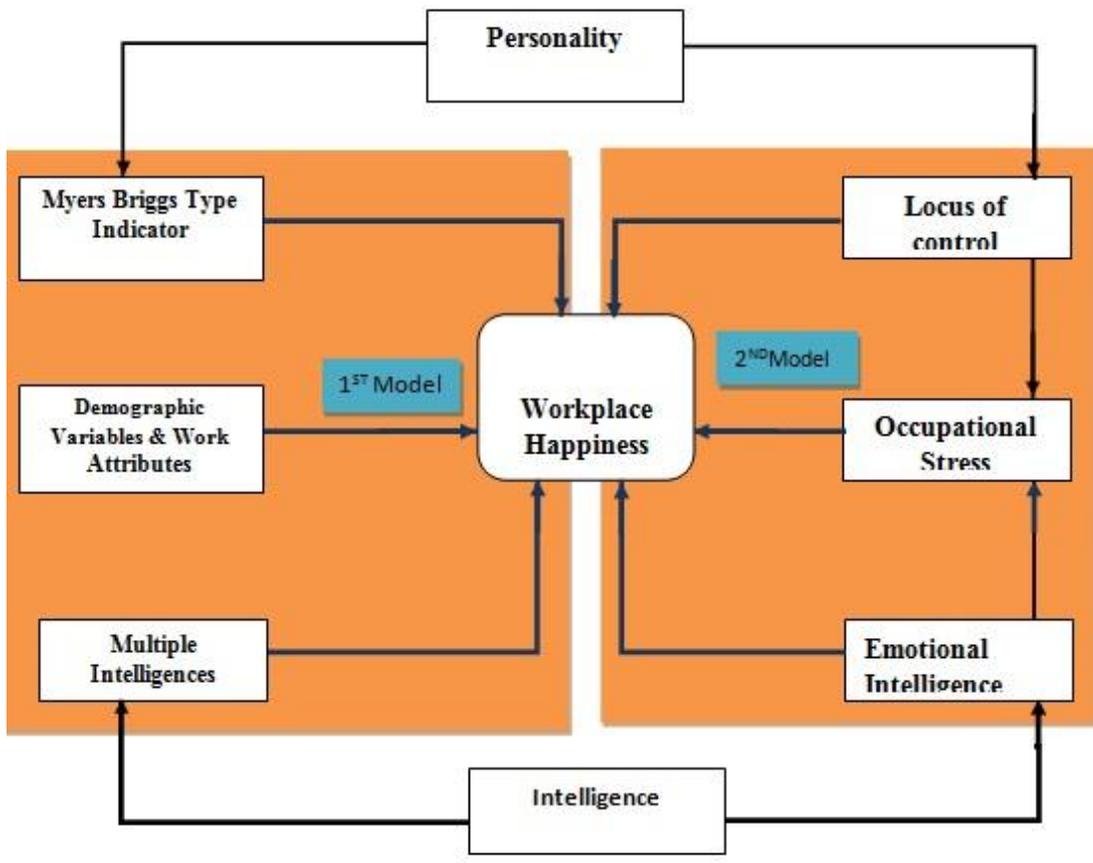
In the second section of the model, Workplace Happiness is the dependent variable and Emotional Intelligence, Locus of Control and Occupational Stress are the independent variables. There are plenty of literatures which exhibit the relationship

between these variables. So, with the help of the empirical study this relationship is planned.

The overall objective of the study is to get the relationship between personalities, intelligence, occupational stress and workplace happiness. The diagrams 3a and 3b on the next page represent the conceptual framework and design of the present research work respectively:



3a. Conceptual Framework



3. b Research Design

3.2.1 Research Hypotheses

To examine the research questions framed in chapter one, some hypotheses are formulated, based on the review of the literatures and theoretical analysis. For research questions two and three descriptive data analysis and for questions one, four and five statistical analysis of relationships is required. The following hypotheses are framed to address the research questions:

H₀₁. Demographic variables (gender, age, education and experience) have no effect on workplace happiness.

H₀₂. Doctors are not satisfied with the important work attributes of happiness in their profession

H₀₃. There is the difference in the combination of personality types and multiple intelligence factors between doctors who are very happy in their profession and doctors who are very unhappy in their profession.

H₀₄. There is a relation between Locus of control (i.e. Internal or External), Emotional Intelligence and Workplace Happiness.

H₀₅. There is a negative relationship between Occupational Stress, Emotional Intelligence, Locus of Control, and Workplace Happiness.

3. 2.2 Design of the Research

The research is designed to investigate personalities, intelligence, occupational stress and workplace happiness of medical doctors and to find out relationships between these variables. This study is empirical, quantitative and descriptive in its design. The quantitative and qualitative approach is followed to accumulate and examination of the data. The reason behind choosing the quantitative method for this research is to assess the relationship among the variables.

To examine the relationship and to test the hypotheses generated a descriptive and quantitative, survey research is designed. This study is empirical in its design and to study the feasible relationship between the study variables and answer the main research questions it applied correlational approach.

3. 2.3 Research Variables

According to Gravetter and Wallnau (2005,in Anita G.du plessis,2014) a research variable indicates feature or state that alter or has different values for the

different individual. The condition or event which the researcher plan to examine or measures or observes, is known as the variable. The variables of this study are personality type as indicated by MBTI, Multiple Intelligence domains, Emotional Intelligence, Locus of control, Occupational Stress, and Workplace Happiness.

The outcome or the end result in which the researcher is interested is called dependent variable. It is observed to measure the effect of changes in the treatment. The independent variable will change or persuade dependent variable when it changes. It generally consists of one or more treatment state of affairs to which individual is exposed (Anita G. du plessis, 2014). The EI, Loc, and OS are the independent variables and Workplace Happiness is the dependent variable in the study.

3. 2.4 Population and Sample

Generally, the researchers want to generalize their research outcomes on a set of objects or individuals. This objects or individuals are considered as population (Anita G. du plessis, 2014). The population of the present research on which the research work has been carried out is the medical doctors of North Bengal which is located in Darjeeling district, West Bengal. This medical college has been catering the healthcare service to the people of north zone of West Bengal since fifty years.

It would not be possible to assess the study variables of the total population. So a sample from the population has been selected to evaluate. A sample is a small group from a large population. It is a subset of the population. (Anita G. du plessis, 2014). The doctors /physicians are the sample of the study.

3. 2.5 Sample Method and Sample Size

The data for the purpose of the study were collected from the doctors of North Bengal medical college in West Bengal .The reason behind the choice of North Bengal Medical College is that it is the only referral health care centre for the patients of four districts of West Bengal. This college provides tertiary care not only to the patients of West Bengal but also to the patients of adjacent states like Assam and Bihar. Patients for treatments from other countries like Bangladesh and Nepal also come to this medical college. It is one of the rural medical colleges which serve primary care along with tertiary care. In this college medical professional from West

Bengal Medical Education Service and West Bengal Health Service worked together. One could get the health service of doctors who have just passed medical science or very recently joined the health care system, along with service of senior doctors who have been working in the college for a long time. There is a need to understand the factors responsible for doctors' happiness in such a busy medical college. Happy doctors build a new encouraging working environment for health institution and patients.

For this research, samples were drawn by using the simple random method. Convenience sampling technique was followed to select the North Bengal medical college from the state and to choose the respondents from the said college the simple random sampling technique was applied. Due to time and fund constraints, it was not possible to approach to all the doctors to collect data. Some of the respondents had taken the survey booklet but due to their busy schedule not able to fill up the questionnaires. Some respondents did not fill up questionnaire properly. The final sample consists of one hundred two doctors for this research.

3. 2.6. The Procedure of Data Collection

The study is based on primary data. For collecting primary data six standardized tools were employed. These tools were the Myers Briggs Type Indicator, Jobs Central Works Happiness Indicator, Gardener's Multiple Intelligence Test, Linac's EI scale, A.K.Srivastava's occupational stress scale and Loco Inventory. Two surveys were conducted to collect the primary data for the purpose of the present empirical study. The survey booklet of first phase included questionnaires related to biographic information, personality types, multiple intelligences and workplace happiness. The data on emotional intelligence, locus of control, and occupational stress were collected in the second survey. All the questions of the survey sheets comprised of closed-ended, forced-choice and self-reported responses, except the questions of biographic information.

The data were collected by the researcher and also took the help of five persons. They were instructed how to collect data. The average time allowed to fill up the survey booklet was fifty minutes but the respondents in average had taken

fifty-three to fifty-five minutes. The data for the second survey was collected from the respondents who participated in the first survey.

3. 2.7 Data Analysis and Interpretation

The primary data of the research were collected by following survey method and data were analyzed with the help of descriptive and inferential statistics. Descriptive statistics was used to review and manage the data. T-test and One –way ANOVAs were employed to test the research hypotheses which were formulated to answer the research questions. Pearson correlation between the study variables were calculated and presented to assess the relationship between the variables. As the principal analytical tool SPSS version 19 was applied to operate and evaluate the data. The internal consistency or reliability of the research instruments were evaluated with the help of Cronbach's Coefficient Alpha.

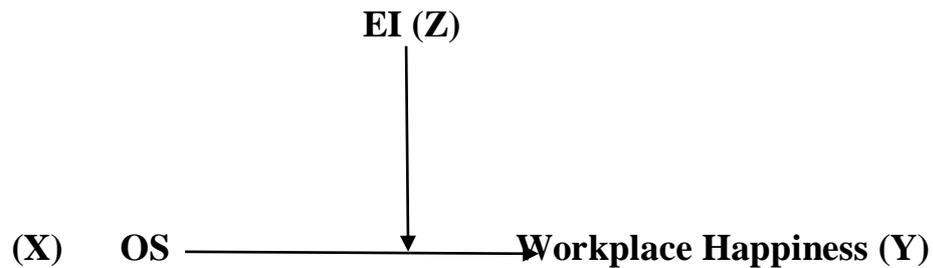
The skewness of all the variables in this research is within an acceptable range of normality ($SK.>-1$ & $Sk. <1$). The Kurtosis of all the variables in this research is also within an acceptable range of normality ($Ku>-2$ & $Ku<2$) (Kevin T. Murphy, 2006). Overall Univariate statistics and normal probability curves of all variables suggest that data for the research are normally distributed. Therefore for statistical purpose in this study regression analysis would be applicable (Anita G. du plessis, 2014).

Tolerance values, VIF (Variance Inflation Factor) and Durbin Watson values of the result of the present study indicate that the assumption of multi-collinearity is fulfilled. Hence, for the statistical purpose the researcher used multiple regression analysis (Anita G. du plessis, 2014).

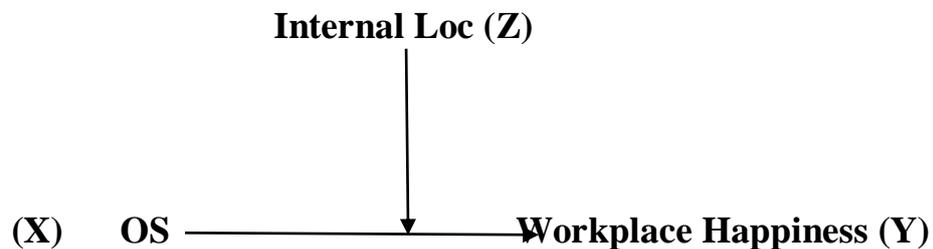
To test moderating role of EI on the relationship between OS and Workplace Happiness and to examine the moderating effects of Internal Loc on the relationship between OS and Workplace Happiness the researcher applied hierarchical/stepwise regression analysis.

“A moderator shows when and under what conditions an independent variable is related to a dependent variable. A moderator is a variable that affects the strength and/or relationship between an independent variable and a dependent variable”(Dr. Brian K. Cooper, 2015).

Moderated regression equation measuring the effects of EI on the relationship between OS and Workplace Happiness (among emotionally intelligent individuals the negative relationship between OS and workplace happiness will not be strong) is $Y=B_0+B_1X+B_2Z+B_3XZ+e$



Moderated regression equation measuring the effects of Internal Loc on the relationship between OS and Workplace Happiness (internal Loc influence the relationship between OS and workplace happiness) is $Y=B_0+B_1X+B_2Z+B_3XZ+e$



The researcher would like to point out here that in behavioral sciences correlation coefficients of $r = .10$, $r =.30$ and $r =.50$ are considered as small, medium and large coefficients respectively [Cohen (1988) Gravetter & Forzano (2009) and Green & Salkind (2003) in Kathungu Beatrice Mwathi (2010)].

3. 2.8 Research Instruments

As a whole six standardized tools were employed to obtain the primary data for the study. In addition to these six questionnaires, a short questionnaire was used to collect data on demographic information. The details of the six instruments are given below:

Biographical information

There was a biographical part in the questionnaire for each respondent to fill up. This part was included to collect information regarding the respondents' biographical character (including gender, age, educational degree and experience).

1. Jobs Central Works Happiness Indicator

Jobs Central Works Happiness Indicator is a tool used to study how happy workers are with their jobs. It has been widely used in Singapore where online participation is voluntary and open to all Singapore workers above the age of 16. It is widely recognized as a comprehensive tool to ascertain workplace happiness.

Jobs Central Work Happiness Indicator has been used to get information about doctors' workplace happiness (jobcentral.com). The Jobs Central Work Happiness Indicator measures workplace happiness which uses a 100-point scoring scale. This instrument has two parts. In the first part, respondents were required to rank the twelve items common work-related attributes, in the order of importance (1 for highest importance ----- 12 for lowest importance). In the next part, respondents were required to assign a satisfaction score (1 = absolutely not satisfied10 = totally satisfied) to each of these attributes. Each work attributes was then tabulated with a weighted score and mapped into a 100-point scale. The higher the score the happier an employer was considered (jobscentral.com). The Cronbach's alpha of this scale was .824.

2. The Myers Briggs Type Indicator (MBTI)

To identify the respondents' personality types The Myers Briggs Type Indicator (MBTI) was used. The MBTI is a self-report questionnaire based on Carl Jung's theory of psychological types. There are eight personality preferences which are paired along four bi-polar scales. There are no rights or wrong responses and all eight preferences are equally valid. The four dimensions can be combined to identify sixteen personality types designated by four letters representing each of the preferred mental attitudes and function (e.g. ESTJ, INFP etc).

In the present research, the researcher used twenty items modified version of MBTI (braintypes.com). The Cronbach 's alphas were ----EI-.79, SN-.84, TF-.74 and JP-.82 (Stephen Rushton et.al.,2007)

3. Multiple Intelligences

Primary data on MI were collected by using Gardener’s multiple intelligences inventory (self-assessment tool) (ww.drexcel.edu). Multiple intelligences test is used to identify eight multiple intelligence abilities as defined by Gardner (2006), namely verbal-linguistic, logical-mathematical, visual-spatial, musical-rhythmic, interpersonal, intrapersonal, bodily-kinesthetic, and naturalistic. The multiple intelligences inventory consists of a total of 80 statements, including 10 statements about each intelligence domains in the theory of multiple intelligences under each of the 8 sub-sections. The items are rated on a five-point rating scale including “Not like me ” (Value 0) to “Very much like me” (value 4). We computed the medical professionals’ scores on the items representing eight intelligence domains to identify their multiple intelligence domains. When evaluating the scores for each intelligence domains, those with a total score between 32 to 40 were described as having “highly advanced”, those with scores between 24 to 31 as “advanced”, those with scores between 16 to 23 as “moderately advanced”, those with scores between 8 to 15 as “slightly advanced” and those with scores between 0 to 7 as having “unadvanced” intelligence levels. Thus, the researcher interpreted the advancement levels of intelligence domains. The following table represents the alpha of eight MI domains.

MI Domains	Alpha
verbal-linguistic	.652
logical-mathematical	.770
visual-spatial	.700
musical-rhythmic	.793
interpersonal	.744
intrapersonal	.673
bodily-kinesthetic	.646
naturalistic.	.775

4. Emotional Intelligence

Data on EI were collected by using Linac EI Scale (linactraining.co.uk). It consists of fifty items. The EI scale of Linac assesses five distinct areas of abilities: Self Awareness, Self Regulation, Self Motivation, Social Awareness and social skills. Linac EI has five sub-scales and each scale has ten items. It is a five –pint Likert scale

ranging from “Always”(value 10) to “Rarely” (value 2). The Cronbach’s alpha of this scale was .880.

5. Occupational Stress

The level of respondents Occupational Stress in this research has been assessed by thirteen items occupational stress scale of A.K.Srivastava (pp.187). It is a five –point Likert scale ranging from “Absolutely true”(value 5) to “Absolutely false” (value 1). The Cronbach’s alpha of this scale was .793.

6. Locus of control

In the study to measure Locus of control Loco Inventory (Pareek, pp.185) was applied. It consists of thirty items and ten items for each internality, externality (other) and externality (luck). We considered only internality and externality. The distribution of the thirty items in the inventory as taken in the study is given in the following table:

Internality(item number)	Externality(item number)
1, 2,3,10,16,23,20. 25,27,28	4,5,6,7,8,9,11,12,13,14, 15,17,18,19,21,22,,24,26,29,30

The scale is a five –point Likert scale ranging from “Hardly feel”(value 0) to “Strongly Feel” (value 4). To find out the type of Locus of control present in doctors we used ratio analysis. The ratio greater than one considered as internal Loc. The reliability of this scale in the present study was .821.

Chapter –Four

Analysis of Relationship between Demographic Variables, Work Attributes and Workplace Happiness

4.1 Introduction

Happiness is a state of feeling which gives us the drive to stay, the power to move forward and the motivation to do good for others. It is imperative for any organization to agree on whether their employees are happy with their present work. Happiness is not an indistinct and unreal concept but it could build organization successful and direct to a lot of financial implications for the company (Daryl Famacion, 2012).

Happiness at work is a feeling of happiness derived from work. Happiness in the workplace contributes many positive outcomes such as increasing productivity, quality, customer satisfaction, creativity and innovation, flexibility, decreasing loss and, improved interpersonal relationships. On the other hand, unhappiness in the workplace has been associated with decreased work performance, increased risk of accidents, increased absenteeism, sick leave, short term or long term disability, burnout, increased job turnover rates, various health conditions, and increased disability and health care costs (peter war, 2009). It is, therefore necessary to generate and sustain employees' workplace happiness.

4.2 Primary Objective

1. The aims of this chapter are to study the relationship between Demographic Variables, Work Attributes, and Workplace Happiness.

4.2.1 Sub- Objectives

The following sub-objectives are considered for this chapter

1. To analyze the relationship between demographic variables with the level of job happiness of medical doctors of North Bengal in West Bengal.
2. To identify the work attributes that affect happiness at work and
3. to study the relationship between works attributes and workplace happiness

4.3. Research hypotheses

The hypotheses considered in this chapter are:

H₀₁: Demographic Variables (gender, age, education, and experience) have no effect on workplace happiness.

H₀₂: Doctors are not satisfied with the important work attributes of happiness in their profession.

4.3.1 Sub Hypotheses

The following statistical hypotheses (sub) have been considered for analysis in this chapter:-

1. There exists a high level of workplace happiness in medical doctors.
2. There is no significant difference between the levels of workplace happiness of medical doctors with the variation in the gender.
3. There is no significant difference amongst the level of workplace happiness of medical doctors with the variations in age.
4. There is no significant difference between the levels of workplace happiness of medical doctors with the variations in the education standard achieved.
5. There is no significant difference amongst the level of workplace happiness of medical doctors with the variations in the experience as doctor.
6. There is a positive relationship between workplace happiness and work attributes.

4.4 Findings

This section deals with the analysis and interpretations related to the objectives and hypothesis of the chapter.

4.4.1 Level of workplace happiness

Table-4.1 Happiness Degree/Level and Interpretation

Class interval of the score	1-20	21-40	41-60	61-80	81-100
Interpretation of the score	Very Unhappy	Unhappy	Moderate	Happy	Very happy

Source: Compiled from Survey data

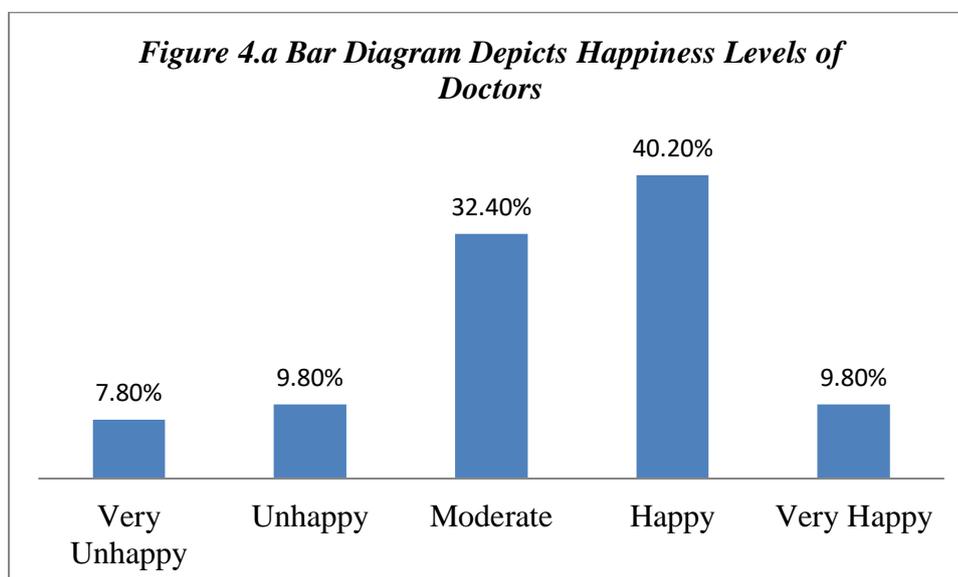
Happiness Indicator measures workplace happiness which uses a 100-point scoring scale. The maximum one respondent can score is 100 and a minimum possible score is 1. The interval of scores from 1 to 100 was divided into five equal classes to represent five different levels of happiness. Details are given in table No.4.1. In other words, if the total scores in respect of any respondent lie between 1 and 20, the respondent will be considered to be very unhappy and so on.

Table 4.2 shows that fifty percent of the doctors are happy at work. Ten doctors as equivalent to 9.8% of the respondents answered that they were very happy at work. The table also shows that 7.8% of the doctors do not like their work.

Table -4.2 Frequencies and Percentage of Levels of Happiness of Doctors

Very unhappy		Unhappy		Moderate		Happy		Very Happy	
No.	Percentage.	No.	Percentage.	No.	Percentage.	No.	Percentage.	No.	Percentage.
8	7.8	10	9.8	33	32.4	41	40.20	10	9.8

Source: Compiled from survey data



Hypotheses Testing

Sub-hypothesis one: Medical doctors have a high level of Workplace Happiness

Table -4.3 One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean	Skewness	Kurtosis
Happiness	102	57.4275	21.15484	2.09464	-.869	.631

Source: Compiled from survey data

From the table - 4.3, it can be observed that mean of medical doctors' workplace happiness scores is 57.4275. At 95% confidence interval; the upper limit of workplace happiness of this population is 11.58 and the lower limit is 3.27 (table 4.4).

Table -4.4 One-Sample t Test

	Test Value = 50 .5					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Happy	3.546	101	.001	7.42755	3.2723	11.5828

Source: Compiled from survey Data

To test the research hypothesis that medical doctors have a high level of happiness, one sample t -test is used. The obtained t is significant, $t(101) = 3.546$, $p = .001$ (table 4.4). Since the p -value is significant ($< .05$), we can say that population mean is not equal to sample mean, hence the research hypothesis is accepted.

Inference: In table- 4.4 we see that obtained mean for workplace happiness (57.42) is higher than the assumed mean (50.5) and alpha value ($.01 < .05$) is significant. It means that medical doctors have moderate to high level of happiness and the hypothesis one which postulates that doctors expressed a high level of workplace happiness is accepted.

4.4.2 Demographic Data

In social science research, to convey and to give the answer to the research problem the personal characteristics of participants play an important role. The detection of the demographic profile of the respondents is required to learn the relationship between various demographic profiles and workplace happiness. Gender is a significant factor in Indian social settings which is erratically influenced by any

social or economic event. So in this study, the variable gender is studied.

Age of the sample is one of the very crucial factor in getting respondents outlooks about the specific problems; age shows maturity level of persons in that logic it comes to be a vital factor to assess workplace happiness.

Educational standard influenced individuals' way of thinking, feeling and looking towards any specific events. To some extent behavior of an individual is likely to be set by his/her educational level. So, it is very important to identify the respondent's educational background. (Mondy, Noe and Premeaux in Kokila.P, 2016).

The demographic data in the sample related to gender, age, education level and experience help to evaluate the personal characteristics of respondents and also enable to assess the research purpose, which is to find out the relationship between doctors' workplace happiness, demographic variables, personalities and intelligence.

Gender Profile

In present day in health profession male and female work together. The gender issues in workplace happiness are pertinent. So the gender of respondents is studied.

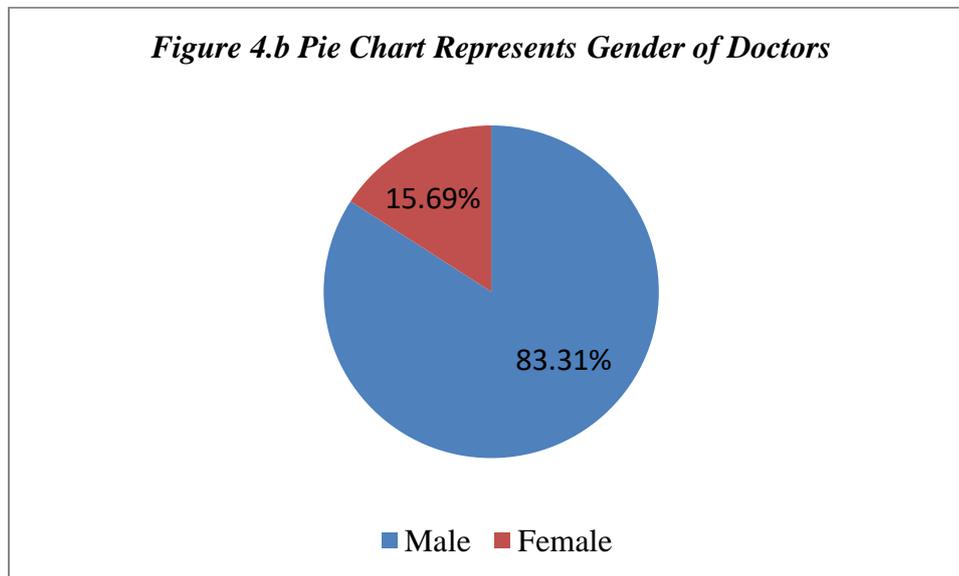
Table- 4.5 Summary of Demographic Data (N = 102)

Variables	Frequency	Percentage
Gender :Male	86	84.31
Female	16	15.69
Age	Range:	
25-30	62	60.78
31-40	19	18.63
41-50	15	14.71
>50	6	5.88
Education Level:		
Bachelor (Graduate)	42	41.18
Master (Post Graduate)	60	58.82
Years as Doctors:		
1-3	61	59.80
4-7	14	13.73
8-11	08	7.84
> 11	19	18.63

Source: Compiled from survey data

The table-4.5 gives the picture of frequency and percentage distribution of demographic variables. Out of hundred two respondents, eighty-six are male and

sixteen are female. It means that the number of male participants (84.31%) in the survey is higher than female (15.69%) participants. Male and female ratio is 5.37:1



Age profile

As individuals grow older their desires and preferences may vary and people may be tired of something with their current jobs and they need challenges, (Mondy, Noe and Premeaux in Kokila.P, 2016). So aging could weight workplace happiness and thus the age of the respondents is collected to observe whether there is any variation in workplace happiness on the basis of the age of the respondents. The total sample is classified into four age groups.

Figure 4.c Pie Chart Depicts Age of Doctors

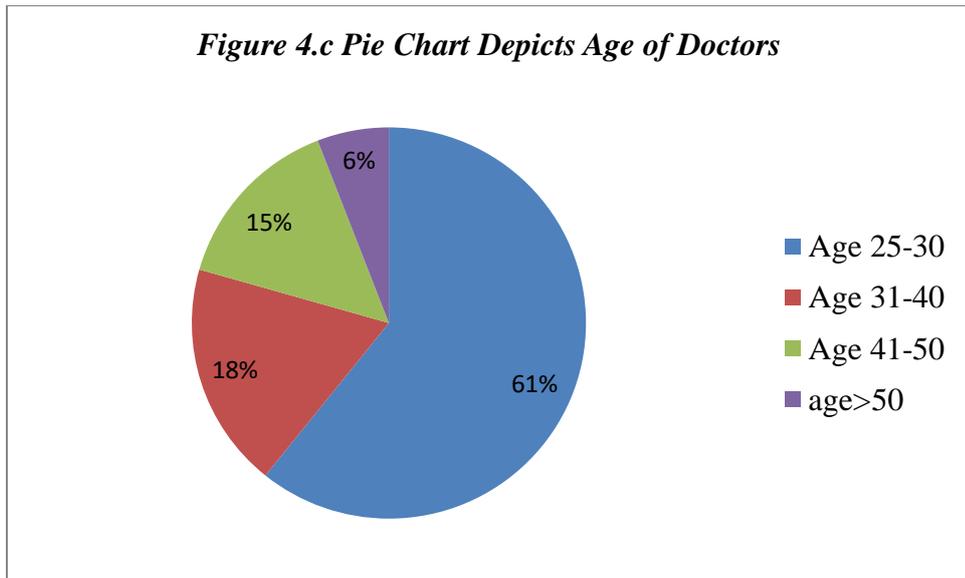


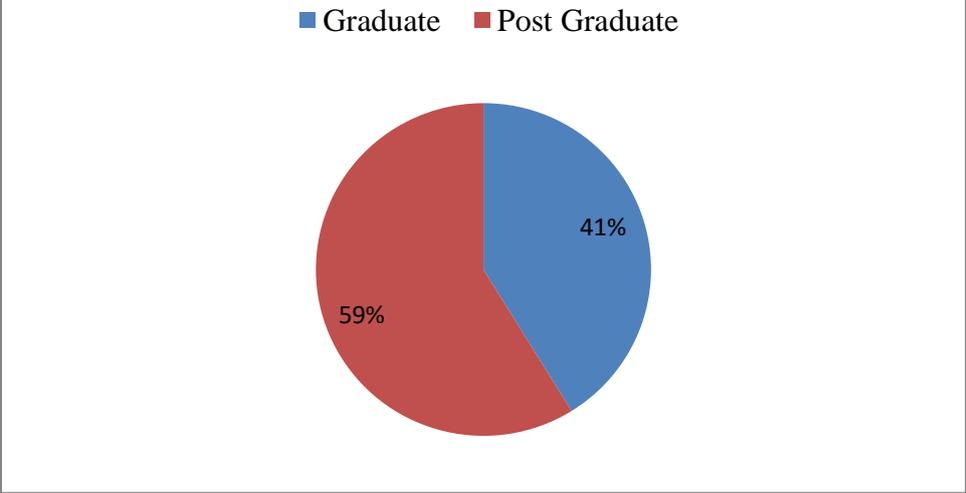
Table-4.5 also shows that the majority of the doctors who participated in this survey are young. Almost eighty percent of them fall under the age of 40 years. There are more participant within the age group of 25 to 30 years (60.78%), followed by the age group of 31 to 40 years (18.63%), while the highest age group in the study is 50 years above and 5.88% participants fall in this age group.

Education Profile

It is generally believed that people with higher education standard are happy. Therefore, educational level of the sample is surveyed on the hypothesis that the education level would change the workplace happiness.

In this study, 41.18% of the respondents have graduation degree in medical science. Table-4.5 shows most of the doctors have post graduation degrees (58.82%). Out of sixteen female doctors of the survey, 56.25% have post graduation degree.

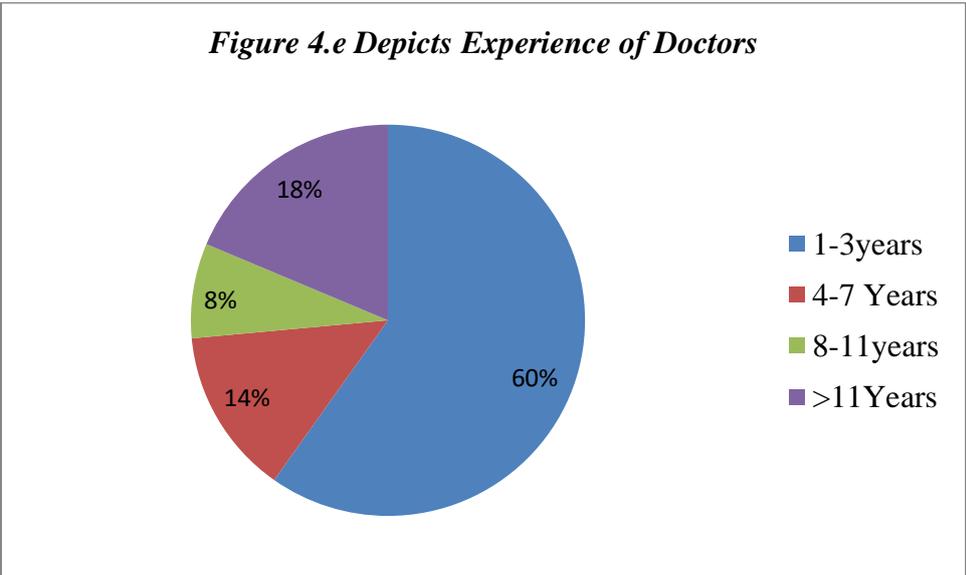
Figure 4.d Depicts Education Standard of Doctors



Experience

The experience in service carries with it the ability for any individual to choose correctly what he /she requires from service. According to the experience of the doctors of the sample, they are separated into four groups. The doctors of the first group have the experience 1-3 years, second group doctors have 4-7 years experience, third group doctors have experience of 8-11 years and the fourth group doctors have above 11 years' experience. Table 4.5 reveals 7.84% has experience of 8-11 years and rest 18.63% has experienced above 11 years.

Figure 4.e Depicts Experience of Doctors



Hypotheses Testing

Research hypothesis one: Demographic Variables (gender, age, education, and experience) have no effect on Workplace Happiness.

4.4.2.1 Level of Workplace Happiness of Medical Doctors Based on Gender Variation

In this section workplace happiness profiles of doctors with respect to gender are analyzed and the hypothesis that there is no significant difference between the levels of workplace happiness of medical doctors with the variation in the gender is tested.

Table-4.6 Workplace Happiness Profiles of Doctors with Respect to Gender

Degree of happiness	Very unhappy	Unhappy	Moderate	Happy	Very happy
Gender					
Male	3.9	9.8	31.42	30.63	8.82
Female	3.9	Nil	.98	9.57	.98

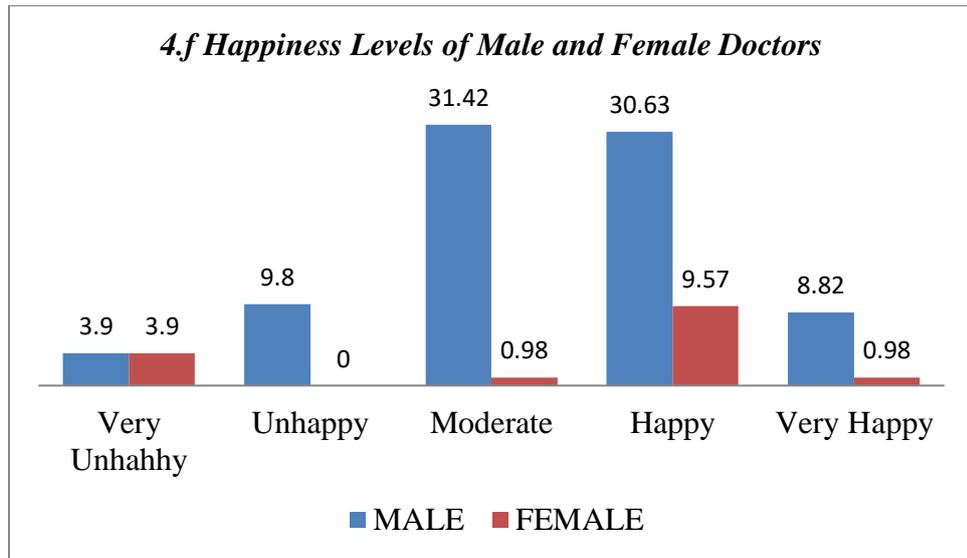
Source: Compiled from survey data, Figures in percentage

The table 4.6 shows that out of very unhappy doctors 50% are (4/8) female and the percentage of the very happy female doctor is only 6% (1/16). There is no female doctor in the unhappy group. Only 1% female doctor is moderately happy. Out of happy male doctors, almost 31% are happy and 9% are very happy. The percentage of moderately happy male doctors is 30.

Table-4.7 Mean of Workplace Happiness of Medical Doctors Based on Gender

Gender	N	Mean	Std deviation	Std Error	95% confidence Interval	
					Lower Bound	Upper Bound
Female	16	52.653	29.039	7.259	37.178	68.127
Male	86	58.315	19.438	2.096	54.148	62.483

Source: Compiled from survey data



In the sample, mean of workplace happiness scores of male and female doctors are 58.315 and 52.653 respectively (table-4.7). At 95% confidence interval, in the population the upper limit of mean of workplace happiness of male doctors is 62.483 and of female doctors is 68.127. In the population, the lower limit of mean of workplace happiness of male and female medical doctors is 54.148 and 37.178 respectively.

Table-4.8 ANOVA Analysis Based on Gender Variation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	432.577	1	432.577	.966	.328
Within Groups	44767.687	100	447.677		
Total	45200.264	101			

Source: Compiled from Survey Data

From the table - 4.8, we find that the probability calculated i.e. .328 is greater than $\alpha = 0.05$. Hence, we accept the hypothesis that there is no significant difference between the level of workplace happiness of male and female medical doctors. We conclude that our experiment does not provide evidence that the difference between the level of workplace happiness of male and female medical doctors is statistically significant in the population.

4.4.2.2 Level of Workplace Happiness of Medical Doctors Based on Age Variation

In this section workplace happiness profiles of doctors with respect to age is discussed and the hypothesis that there is no significant difference amongst the levels of happiness of medical doctors with the variations in age is tested.

Table -4.9 Workplace Happiness Profiles of Doctors with Respect to Age

Degree of happiness	Very unhappy	Unhappy	Moderate	Happy	Very happy
Age					
Upto30	1.9	6	16.8	29.4	5.9
31-40	1	1.9	8.8	4.9	1.9
41-50	4.9	Nil	3.9	4.9	1
>50	NIL	1.9	2.9	1	1

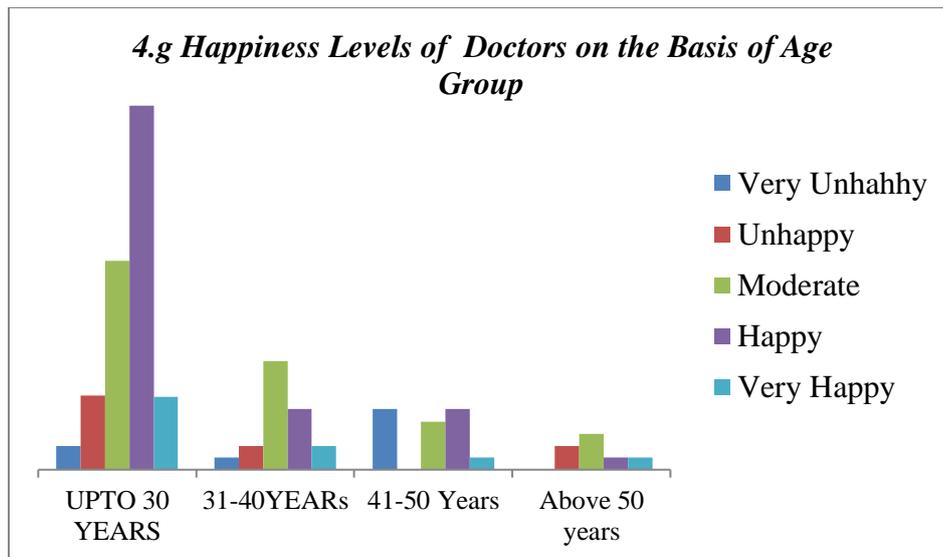
Source: Compiled from survey data, Figures in percentage

In table-4.9 we see that 79% of the doctors are young and among the very happy doctors 80% doctors are below the age group of forty whereas only 20% doctors are above forty years in the group of very happy doctors. The happiest age group is up to 30 years which is 5.9 percent.

Table-4.10 Mean of Workplace Happiness of Medical Doctors Based on Age

	No.	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	62	59.8015	17.51108	2.22391	55.3545	64.2484	3.42	88.18
2.00	19	58.2142	18.83801	4.32174	49.1346	67.2938	14.39	90.31
3.00	15	45.9347	32.35985	8.35528	28.0144	63.8550	1.56	94.16
4.00	6	59.1383	24.84927	10.14467	33.0606	85.2160	28.92	99.15
Total	102	57.4275	21.15484	2.09464	53.2723	61.5828	1.56	99.15

Source: Compiled from survey data; 1== (25-30) yrs, 2= (31-40) yrs, 3= (41-50) yrs and 4=>50yrs



From the table - 4.10, we observed that in the sample, who is aged between 25-30 years, the mean of workplace happiness scores of that group is 59.801. The upper and lower limit (at 95% confidence limit) of this mean is 64.248 and 55.354 respectively. The mean of workplace happiness scores of those who are under age group of 31-40 is 58.21. The upper and lower limit (at 95% confidence limit) of this mean is 65.293 and 49.134 respectively. The mean of workplace happiness scores of those who are under age of 41-50 years is 45.9347. The upper and lower limit (at 95% confidence limit) of this mean is 63.858 and 28.014 respectively. The mean value of workplace happiness scores of those who are above 50 years is 59.138. The upper and lower limit (at 95% confidence limit) of this mean is 85.216 and 33.060 respectively.

Table -4.11 ANOVA Analysis Based on Age

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2360.009	3	786.670	1.800	.152
Within Groups	42840.254	98	437.145		
Total	45200.264	101			

Source: Compiled from survey data

From the table -.4.11, it may be concluded that there is no significant difference in the mean scores of happiness of medical doctors having a different age group in the profession. This is because significant value calculated (i.e. .152) is

greater than ALFA=0.05. Thus research sub-hypothesis is accepted and it is concluded that there is no significant difference in the level of happiness of young and aged medical doctors.

4.4.2.3 Level of Workplace Happiness of Medical Doctors Based on the Educational Standard Variation

In this section workplace happiness profile of medical doctors of North Bengal medical college, with respect to the educational degree is analyzed and the sub-hypothesis that there is no significant difference between the levels of workplace happiness of medical doctors with the variations in the level of educational qualification achieved is tested.

Table -4.12 Workplace Happiness Profiles of Doctors with Respect to Educational Degree

Degree of happiness	Very unhappy	Unhappy	Moderate	Happy	Very happy
Education					
Bachelor	2.9	1.9	11.7	19.6	4.9
Master	4.9	7.9	20.7	20.6	4.9

Source: Compiled from survey data, Figures in percentage

The table-4.12 shows that doctors with bachelor and master degree are in all happiness groups. It can be inferred that level of education not significantly affect workplace happiness, Almost five percent doctors with bachelor and master degrees are very happy in this study. 4.9% doctors with master degree and 2.9% doctors with a bachelor degree are very unhappy in their profession.

Table-4.13 Mean of happiness of Medical Doctors Based on Education Standard

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	42	60.7679	17.92884	2.76648	55.1808	66.3549	3.42	86.89
2.00	60	55.0893	23.00495	2.96993	49.1465	61.0321	1.56	99.15
Total	102	57.4275	21.15484	2.09464	53.2723	61.5828	1.56	99.15

Source: Compiled from survey data; 1= Bachelor degree and 2=Master degree

As recorded in the table -.4.13, in the sample, it is observed that medical doctors who have bachelor degree have the high level of workplace happiness. The mean of workplace happiness scores of those who have the bachelor degree in medical science is 60.767. The upper and lower limit (at 95% confidence limit) of this mean is 65.354 and 55.180. The mean of happiness scores of those who have a master degree in medical science is 55.089. The upper and lower limit (at 95% confidence limit) of this mean is 61.032 and 49.146.

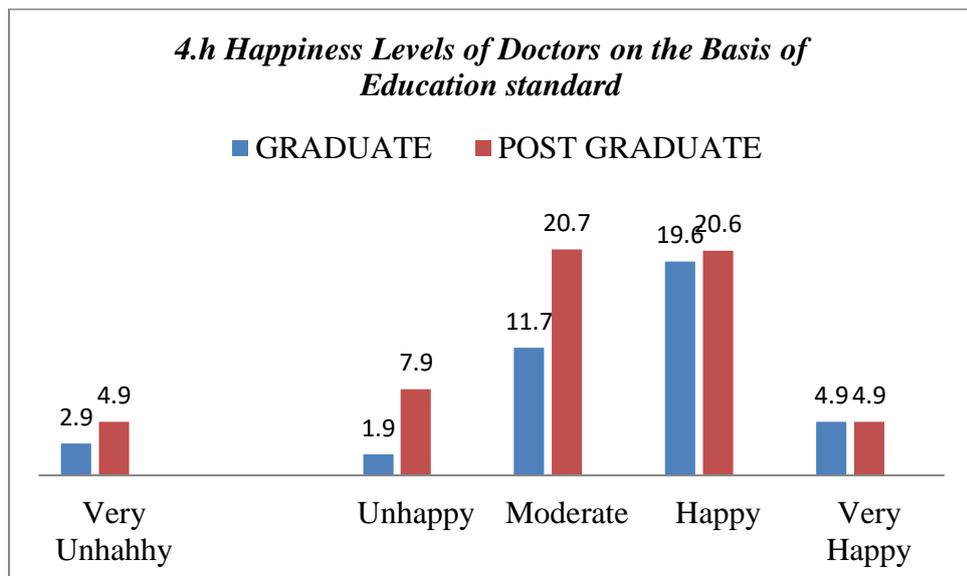


Table -4.14 ANOVA Analysis Based on Education Standard Variation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	796.657	1	796.657	1.794	.183
Within Groups	44403.607	100	444.036		
Total	45200.264	101			

Source: Compiled from survey data

From the table -.4.14, it may be concluded that there is no significant difference between the mean of workplace happiness scores of medical doctors having a different educational qualification. This is because significant value calculated (i.e. .183) is greater than ALFA=0.05. Thus the sub- hypothesis is accepted and it is concluded that there is no significant difference between levels of happiness of medical doctors with the variation in the level of education standard achieved.

4.4.2.4 Level of workplace Happiness of Medical Doctors Based on Experience in Service Variation

In this section, workplace happiness profile of North Bengal Medical College’s doctors with respect to service experience and the hypothesis that there is no significant difference amongst the levels of workplace happiness of medical doctors with the variations in the experience in service is tested.

Table-4.15 Workplace Happiness Profiles of Doctors with Respect to Experience

Degree of happiness	Very unhappy	Unhappy	Moderate	Happy	Very happy
Experience					
1-3	1.9	6.9	19.7	25.5	4
4-7	1	1	4.9	5.9	2
8-11	2	Nil	2.9	2.9	1.9
>11	2.9	1.9	4.9	5.9	1.9

Source: Compiled from survey data; Figures in percentage

Table 4.15 reveals that junior (4%) doctors are happier than senior (1.9%) doctors. Young doctors are happier than older doctors. Among the very unhappy

doctors, 4.9% are having work experience above eight years and 2% are with one to seven years in the profession.

Table-4.16 Mean of happiness of Medical Doctors Based on Experience

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	61	59.2779	16.56003	2.12029	55.0366	63.5191	3.82	88.18
2.00	14	55.6943	25.68079	6.86348	40.8666	70.5219	3.42	90.31
3.00	8	58.3150	21.20588	7.49741	40.5864	76.0436	29.20	86.89
4.00	19	52.3905	30.07911	6.90062	37.8929	66.8882	1.56	99.15
Total	102	57.4275	21.15484	2.09464	53.2723	61.5828	1.56	99.15

Source: Compiled from survey data; 1= (1-3) yrs, 2== (4-7) yrs, 3== (8-11) yrs and 4=>11yrs

From the table - 4.16, we observed that in the sample, who have experience in the profession of 1 to 3 years have the high level of happiness. The mean of workplace happiness scores of those who have 1 to 3 years of service experience is 59.277. The upper and lower limit (at 95% confidence limit) of this mean is 63.5191 and 55.036 respectively. The mean of workplace happiness scores of those who have 4 to 7 years of service experience is 55.994. The upper and lower limit (at 95% confidence limit) of this mean is 70.52 and 40.86 respectively. The mean of workplace happiness scores those who have 8 to 11 years of service experience is 58.315. The upper and lower limit (at 95% confidence limit) of this mean is 76.043 and 40.586 respectively. The mean of happiness scores of those who have above 11 years of service experience is 52.39. The upper and lower limit (at 95% confidence limit) of this mean is 66.88 and 37.892 respectively.

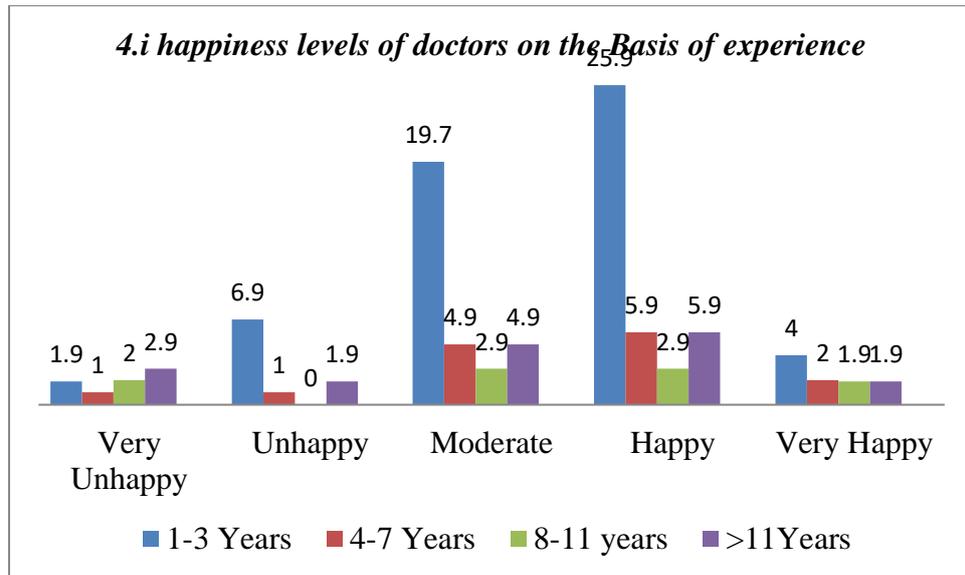


Table -4.17 ANOVA Analysis Based on Experience in Service Variation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	739.264	3	246.421	.543	.654
Within Groups	44460.999	98	453.684		
Total	45200.264	101			

Source: Compiled from survey data

From the table -4.17, it may be concluded that there is no significant difference in the mean score of happiness of medical professionals having a different level of experience in the profession. This is because significant value calculated (i.e. .2654) is greater than $P=0.05$. Thus sub- hypothesis is accepted and it is concluded that there is no significant difference in the level of happiness of less experienced and more experienced medical doctors.

Inference: We can conclude that our experiment does not provide evidence that the difference in workplace happiness on the basis of demographic variables is statistically significant in the population. Thus we accept the research hypothesis one that demographic variables (gender, age, education, and experience) have no effect on workplace happiness of medical doctors of North Bengal.

4.4.3 Analysis of Work Attributes Responsible for Workplace Happiness

Research Hypothesis two: Doctors are not satisfied with the important work attributes of happiness in their profession.

Table-4.18 The Work Attributes by Importance

Rank	Most Important Work Attributes(by rank)	Score (out of 12)	Responses as Highly Important
1	Salary	8.44	24.5%
2	Interesting work	8.11	23.5%
3	Work life balance	7.39	15%
4	Positive impact to society	7.04	8%
5	Autonomy at work	6.78	7%
6	Job security	6.41	7%
7	Advancement opportunities	6.24	7%
8	Good relation with Management	5.9	5%
9	Good relation with colleague	5.53	4%
10	Safe working condition	5.47	3%
11	Location Of Work	5.23	2%
12	Acceptable Work Demand	5.08	1%

Source: Compiled from survey data

In table-4.18 we observed the order of work attributes ranked by respondents according to their importance of happiness at work. The five most important work attributes are salary, interesting work, work- life balance, positive impact on society and autonomy at work.

24.5 percent of medical doctors ranked salary as the most important work attribute of their workplace happiness and gave it the highest score of 8.44 (out of a maximum score of 12) . The table also reveals that interesting work is selected by 23.5 percent of the participant as the second most important work attribute for their workplace happiness. With a score of 7 works -life balance ranked to 3rd place.

Work attribute acceptable work demand scored least point 5.08 out of 12 and considered by the respondents as the less important factor of their workplace happiness. The work attribute location of work with a score of 5.23 points comes to the next least important position. This indicates that the doctors considered the internal factors (salary) as the most important for their workplace happiness. They

would get these internal factors from their job rather than the environment that they are working in.

Table-4.19 Most Satisfied to Dissatisfied Work Attributes

Attribute	Score(Out of 10)	Highly Satisfied
Job security	7.12	31%
Good relations with colleagues	6.87	27%
Acceptable work demands	6.4	25%
Location of work	6.4	24%
Safe working conditions	6.4	23%
Salary	6.35	22%
Work-life balance	6.03	21%
Good relations with management	5.83	21%
Positive impact to society	5.76	19%
Advancement opportunities	5.74	15%
Interesting work	5.68	14%
Autonomy at work	5.49	9%

Source: Compiled from survey data

The table-4.19 reveals that doctors have the highest level of satisfaction with the work attribute of job security. This work attribute scored 7.12 out of 10 and 31% doctor satisfied with it. The next most satisfied work attribute with which doctors are satisfied is the relationship with colleagues. Twenty-seven percent doctors gave it 6.87 points out of ten. The other work attributes which come under the top five mostly satisfied work attributes groups are acceptable work demands, the location of work and safe working condition. Twenty-five percent doctors are satisfied with acceptable work demands and twenty-three percent doctors are satisfied with safe working condition. The work attributes autonomy and interesting work, both scored the least in terms of satisfaction level, but the doctors have rated these two work attributes as most important for their workplace happiness. Only nine percent doctors are satisfied with autonomy at work. Autonomy at work is the least satisfied work factor and it scored 5.49 out of 10. The work attribute interesting work scored 5.68 out of 10 and come to second lowest satisfaction level. Twenty-five percent doctors are least satisfied with this factor. The percentage of doctors who reported that they are not

happy with the advancement opportunities of their current jobs is eighty- five. Good relation with management ranked the fifth place of dissatisfaction level.

Pearson Correlation has been used to test the relation between workplace happiness and work attributes. The table -4.20 shows that all twelve works attributes are positively and significantly related to medical doctors' workplace happiness. Since the Alpha value, .000 is less than.01 we accept the null hypothesis that there is a positive relationship between happiness and work attributes.

Table 4.20 Pearson Correlation between Happiness and Work Attributes.

Variables	r	Sig.
Interesting work	.376**	.000
Autonomy at work	.356**	.000
Positive impact to society	.562**	.000
Good relations with management	.509**	.000
Work-life balance	.350**	.000
Advancement opportunities	.380**	.000
Salary	.305**	.002
Good relations with colleagues	.383**	.000
Job security	.513**	.000
Acceptable work demands	.502**	.000
Location of work	.497**	.000
Safe working conditions	.521**	.000

Sources: compiled from survey data

Table-4.21 Summary of Regression Analysis

Model Summary			ANOVAs		
R	R ²	Adjusted R ²	F	Sig	Durbin Watson
.795	.632	.582	12.710	.000	1.960

Source: Compiled from survey data

The Summary of regression analysis (table No.4.21) shows the adjusted R² value to be .632 which predicts that 63 % of the variance in the happiness of the medical doctors is caused by twelve work attributes.

The results of Regression Coefficient (table-4.22) indicate that out of twelve work attribute, five (Positive impacts to society, Location of work, Safe working

conditions, Job security and Advancement opportunities) are best predictors of workplace happiness.

Table 4.22 Summary of Regression Coefficient

ATTRIBUTES	BETA	Sig.
Interesting work	.111	.250
Autonomy at work	.048	.584
Positive impact to society	.278	.003
Good relations with management	.059	.640
Work-life balance	.063	.434
Advancement opportunities	.186	.021
Salary	.044	.550
Good relations with colleagues	.020	.805
Job security	.198	.021
Acceptable work demands	-.006	.945
Location of work	.259	.004
Safe working conditions	.200	.020

Source: Compiled from survey data

The results of Regression Coefficient (table-4.22) indicate that out of twelve work attribute, five (Positive impacts to society, Location of work, Safe working conditions, Job security and Advancement opportunities) are best predictors of workplace happiness.

Interference: We can conclude that our experiment provides evidence that doctors are not satisfied with the important work attributes of happiness in their profession. Thus we accept the research hypothesis two that doctors are not satisfied with the important work attributes of happiness in their profession.

4.4.5 Discussion

In this chapter two research hypothesis have been tested; one is demographic variables (gender, age, education, and experience) have no effect on workplace happiness and another one is doctors are not satisfied with the important work attributes of happiness in their profession.

Data on happiness across gender indicates that male has a higher mean of workplace happiness scores than female but this difference is statically not significant.

This finding is consistent with the result of Suojaenen, Ilona (2012). The finding is not in line with the result of Ian C. Barrett (1980) who found sex was positively related. Daryl S. Famacion-Quinco (2012) results showed that 50 percent of the administrators of La Salle University were happy at work. They were mostly women. At work, women were more satisfied and happy (Warr 2007). Sharon S. Andrew, 2011 reported 82% women were happy in their jobs compared to 78 percent of men. Blanchflower and Oswald (2011) in their review found that women were happier than men.

The result of ANOVA analysis of happiness based on age reveals that there is no significant difference amongst the levels of workplace happiness with the variation of age. This finding supports the result of Ian C. Barrett (1980) who found that age was unrelated. Blanchflower and Oswald (2011) in his review found that age was not affecting happiness. This finding contradicts the findings of Malee Geounuppakul et al who investigated that age had influenced on workplace happiness of nurses. Mr. Rajnish Ratan et. al. (2011) also discovered that age had influenced on bank employees happiness. Level of happiness decreased with the age (Suojanen, Ilona; 2012).

The result of ANOVA analysis of happiness based on educational qualification reveals that there is no significant difference between the levels of workplace happiness with the variation of educational standard. This result supports the findings of Ian C. Barrett (1980) that educational achievement not linked with happiness. The research by Gavin and Mason (2004) showed that employee education had an influence on happiness. Ruut Veenhoven and Peter Bakker (1977) reported a negative relationship between happiness and level of education. Clark & Oswald (1994) also found a negative relationship between happiness and education. Malee Geounuppakul et al and Ulf-G Gerdtham and Magnus Johannesson (1994) reported that happiness increases with education level.

The result of ANOVA analysis of happiness based on experience in service indicates that there is no significant difference amongst the levels of workplace happiness with the variation of experience in service. This finding does not support the result of Malee Geounuppakul et. al., who reported that work experience, had an impact on workplace happiness of nurses. David Sirota reported senior employees were less happy than the junior employees.

In the present study, the non-significant differences in the demographic variables (gender, age, educational qualification, and experience in service) is observed, possibly it is the reflection of general happiness score. If the contents are considered separately it may be possible that some significant differences may obtain. The sample size may also influence the results.

Medical doctors have moderate to high level of workplace happiness and five factors—positive impact to society, the location of work, safe working conditions, job security and advancement opportunity are the predictors of workplace happiness. Respondent's ranked salary, interesting work, work-life balance, positive impact on society and autonomy at work as important work attributes for their happiness. Job security, good relations with a colleague, acceptable work demands, location of work and safe working conditions are the factors with which doctors are mostly satisfied.

Findings of this study related to factors of happiness are in the line of some previous studies and contradicted with the findings of some other studies.

Suojanen, Ilona (2012) reported safety of work was an important factor in workplace happiness, which is consistent with the result of the present study. It is also an important predictor of workplace happiness in this study. This result does not support the finding of Sirinthorn Saisoonthorn et.al. (2014); which showed that safety of Thai employees did not matter for happiness.

The result of Syed Shakir Ali Ghazali (2007) study supported the finding that doctors working at Bahawal- Victoria Hospital / Quaid-e-Azam Medical College were not satisfied with their income level. Ian C. Barrett (1980) pointed that income was not significantly related to happiness and on the contrary Malee Geounuppakul et.al. reported that income was related to happiness.

Daryl S. Famacion-Quinco (2012) supported our result that job security has an impact on happiness.

4.4.6 Conclusion

The research hypotheses which are formulated in this chapter are not tenable. The sub-hypothesis that there exists a high level of happiness of medical doctors working in North Bengal Medical College is acceptable. The happiness level of medical doctors is moderate to high.

Moreover, the influence of four demographic factors considered in the present study is (gender, Age, educational level attained and years of experience or period of service in profession) not significant in ascertaining the level of happiness. Doctors are not satisfied with the work attributes which they considered are important for their workplace happiness.

Chapter-Five

Analysis of Relationship between Personality Type, Multiple Intelligences and Workplace Happiness

5.1 Introduction

The study of individual differences examines how people are alike and how they are different in their thinking, feeling, and behavior. The two most popular individual differences that psychologists study are general intelligence and personality characteristics. General intelligence and personality are also classified as traits, or lasting dispositions to act in similar ways across situations and have been allied to several organizational and individual outcomes, such as job performance, job satisfaction, career success, leadership, career perspective, and acquirement of job-related knowledge .(www.wilderdom.com)

In recent years to assess the measurement in the domain of individual differences necessitates the incorporation of multiple areas (Kazdin.A.E.). Researchers tend to focus on only one set of constructs at a time when studying individual differences across domains, such as interest, personality, intelligence or values; they have also realized that a more powerful understanding of how individuals adjust to their environments will materialize when multiple areas are assessed simultaneously. This chapter measures personality type by the Myers Briggs Type Indicator and eight domains of multiple intelligences of Howard Gardener's model that are a component of this rising issue of individual differences. In this chapter, the relationship between personality types, multiple intelligences and workplace happiness have also been explained.

5.2 Primary Objective

The primary objectives of this chapter are-- 1. To study the relationship between Personality Type (MBTI), Multiple Intelligences (MI) and Workplace Happiness and 2.To identify the Personality Type and Multiple Intelligences of very happy and very unhappy doctors.

5.2.1 Sub- Objectives

- (i) To identify personality profile of doctors who are working in medical college
- (ii) To study the relation between personality type and workplace happiness
- (iii) To identify multiple intelligence profiles of doctors who are working in medical college
- (iv) To study the relation between multiple intelligences and workplace happiness and
- (v) To identify the personality type and multiple intelligence profiles of very happy and very unhappy doctors.

5.3 Research Hypothesis

H03: There is no difference in the combination of personality types and intelligence factors between doctors who are very happy in their profession and doctors who are very unhappy in their profession

5.3.1 Sub Hypotheses

The following statistical hypotheses (sub) have been considered for analysis in this chapter.

5.3.2 Related to MBTI and Workplace Happiness

1. There is no significant relationship between workplace happiness and personality type.

5.3.3 Related to MI and Happiness

1. There is no significant level of Multiple Intelligences of medical doctors.
2. The Personal variables are not the good predictor of multiple intelligences.
3. There is no relationship between multiple intelligences and workplace happiness of medical doctors of North Bengal.

5.4 Findings Related to the Relationship between Personality Type (MBTI) and Workplace Happiness

This section deals with the analysis and interpretations related to the objectives and hypothesis of the relationship between MBTI and Workplace Happiness.

5.4.1. MBTI Profiles of Doctors

Table -5.1 Comparison of Each Individual Letter in the Four Dimensions

Extroversion 57%	Sensing 53%	Thinking 38%	Judging 41%
Introversion 43%	Intuition 47%	Feeling 62%	Perceiving 59%

Source: Compiled from survey data

Table-5.1 shows the percentage distribution of personality traits of all 102, medical doctors. The doctors have predominant traits of extraversion (E), sensing (S), feeling (F) and perceptive (P). Most doctors have a preference for Extraversion(57%) rather than Introversion(43%), Sensing perception(53%) rather than Intuitive perception(47%), Feeling judgment(62%) rather than Thinking judgment (38%) and a Perceiving orientation(59%) rather than Judging orientation(41%). The thinking is the weakest trait of the doctors only 38% demonstrated such a style. As a group doctors display E-S-F-P traits.

Table -5.2 Myers-Briggs Preferences of Medical Doctors

Sensing Type		Intuitive Types		
Thinking	Feeling	Feeling	Thinking	
ISTJ %=3	ISFJ %=3.5	INFJ %=2.5	INTJ %=2.5	JUDGING INTROVERTS
ISTP %=3.5	ISFP %=9	INFP %=16	INTP %=3.0	PERCEIVING INTROVERTS
ESTP %=3.0	ESFP %=9	ENFP %=10	ENTP %=6	PERCEIVING EXTROVERTS
ESTJ %=15	ESFJ %=7	ENFJ %=5.0	ENTJ %=2.0	JUDGING EXTROVERTS

Source: Compiled from survey data

Table-5.2 shows the percentage distribution of Myers-Briggs preferences of medical doctors. As it is apparent from the table-5.2 sixteen percent of North Bengal

medical college's doctors have INFP type .This type has the maximum representation in the study followed by ESTJ type at fifteen percent. Ten percent doctors have ENFP type of personality, and both ESFP and ISFP represent nine percent in the survey .If we carefully noticed the personality type distribution of doctors, we get that NFP (26/102) is having a dominant preference over SFP (18/102). The personality type INFJ, INTJ, and ENTJ have minimum representation at 2.5% and 2% in the survey.

The survey sheets reveal that eighty- four percent respondents are male and sixteen percent are female. In this study, principal personality type of female is ENFP (3/16) followed by INFP (2/16).There are no female doctors with ENTJ, ESTP, ESFJ, ISTP and ISTJ type (table-5.2) in this research. Female doctors exhibited (in the survey sheets) E-N-F-P traits. In case of female doctors thinking is the weakest trait. Only twenty- five percent female doctors exhibited such style. Fifty percent of the female doctors are introverted, and fifty- six percent are intuitive and seventy- five are both feller and perceiver.

5.4.2. Relation between MBTI and Workplace Happiness

Table 5.3 shows ESFP type represents maximum (2%) number of very happy doctors, but INFP (16%) personality type has the highest representation. Only 9% faculty doctors have ESFP type personality. No ENTJ, ESTP and ISTP personality type of doctors are either very happy or very unhappy. ISFJ, ESFJ and ENFP personality types have same (1%) percent in both groups. No ENTP, ENFJ, INTP, and ISFP types of respondents are very happy but 1% each of this type is very unhappy. In this survey, it is found that no ESTJ, ESFP, INTJ, INFP, ISTP and ISTJ personality types of doctors are very unhappy. ENFP (7), INFP (7), ESTJ (5), ESFP (4), ISFP (4), ENTP (3) and ESFJ (3) types of doctors are moderately happy and they lack enthusiasm. ISFJ, ESFJ, and ENFP types are both in very happy and very unhappy group.

Table-5.3 Personality and Happiness (frequency distribution)

Type/Happy	Very unhappy	Unhappy	Moderately happy	Happy	Very happy	Total
ENTP	1	1	1	3	0	6
ENTJ	0	0	2	0	0	2
ENFP	1	0	1	7	1	10
ENFJ	1	0	2	2	0	5
ESTP	0	0	1	2	0	3
ESTJ	0	2	7	5	1	15
ESFJ	1	2	0	3	1	7
ESFP	0	0	3	4	2	9
INTP	1	0	1	1	0	3
INTJ	0	1	1	0	1	3
INTP	1	0	2	0	0	3
INFP	0	2	6	6	2	16
ISTP	0	1	1	2	0	4
ISTJ	0	0	1	1	1	3
ISFP	1	0	4	4	0	9
ISFJ	1	1	0	1	1	4
Total	08	10	33	41	10	102

Source: Compiled from survey data

Inference: Analysis of data in this study failed to show relationship between MBTI personality types of medical doctors and their happiness at work. The hypothesis that personality types have no significant influence on workplace happiness is accepted. There are no differences in type preference between doctors who were very happy or very unhappy at work.

5.4.3 Discussion

In the survey INFP type has the maximum representation at 16% followed by personality type ESTJ at 15%, in this study INFJ, INTJ and ENTJ are a less preferred types of personality of doctors, which were not astounding given in small sample. These personalities carry important qualities such as originality, interest in discovering causes, ability to solve problems in more concrete fashion and to think about problem critically (mbti.org).

As a group doctors display E-S-F-P traits. It could be reasoned that 'feeling' is required to realize patient's problems, which is why doctors are naturally high in it. Extraversion is necessary to interact and communicate with the patients and other parties, while 'sensing' helps to collect factual information rather than relying on intuition. Finally, being perceptive helps them to keep their opinion open for new information (mbti.org).

Female doctors exhibited E-N-F-P traits; this finding of the study match with the result of other research, that female is feelers, intuitive and perceivers. According to Myers and McCaulley's (1985) manual, a guide to the development and use of the MBTI in decision- making process most of the females generally have a preference for feeling function . First and foremost, feeling types will select for harmony within the group in the process of making decisions process. Females frequently supposed to have a loving quest for the sense that appreciates a human character with affection (Berens, Cooper, Linda, & Martin, 2002). From the table 5.1 and 5.2; it is obvious that there are individual differences in personality characteristic of North Bengal medical college doctors.

We have found that ESFP type stands for maximum (2%) number of very happy doctors, but INFP (16%) personality type had the highest representation in the survey. A number of researchers recommended that the type which has least found in the occupation generally be inclined to be less satisfied and has high tendency to leave the job than the type which are more frequent or who fit job and judge to be good (Hammer in Leonie Tickel,2009). This report is not fully accurate for this survey; ESFP type represents the maximum number of very happy doctor's compare to INFP. There is no ESFP type of doctors in the very unhappy category. Only nine percent doctors have ESFP type personality. This type is concerned with business and

medicine (Myers, 1962). In this study, E-S-F-P showed participants' group traits. This type of people is sociable, responsive, and uncomplaining. ESFP personality type likes working with groups to make things happen. In their work bring common sense and practical approach and make work enjoyable. This type of people are also dynamic and spontaneous, adjust quickly to new people and environments. Gain the best knowledge by trying a new expertise with other people (mbti.org).

The hypothesis that there is no significant relationship between personality type and workplace happiness of doctors is accepted. It can be inferred that there are no differences in type preference between doctors who are very happy or very unhappy at work; nor is it possible to forecast happiness from MBTI preference scores.

5.5. Findings Related to the Relationship between MI and Workplace Happiness

This section deals with the analysis and interpretations related to the objectives and hypotheses of the relationship between MI and workplace Happiness.

5.5.1. MI Profiles of Doctors

Table 5.4 Level of MI and Interpretation

Class interval of the score	32-40	24-31	16-23	8-15	0-7
Interpretation of the score	Highly Advance	Advance	Moderately Advance	Slightly Advance	Unadvance

Source: Compiled from survey data

Howard Gardner measures of MI scale uses a 40 point scoring scale. The maximum one respondent can score is 40 and the minimum possible score is 0. Score 32-40 is considered as highly advanced and 0-7 as unadvanced level. A score between seventeen and twenty- three is leveled as moderately advance (table-5.4).

The results of the Pearson correlation test presented in table-5.5 shows that there are positive and significant inter-correlations among the eight multiple intelligence abilities. The strengths of the correlations are between $r = .15$ and $r = .55$. This means that the eight multiple intelligence abilities are inter-correlated.

Table 5.5 Pearson correlation among Multiple Intelligence Abilities

Pearson correlation	1	2	3	4	5	6	7	8
1. Verballinguistic	1							
2. Logicalmathematical	.402**	1						
3. Visual-spatial	.491**	.308**	1					
4 Bodily kinesthetic	.332**	.152	.463**	1				
5. Musicalrhythmic	.309**	.314**	.541**	.329**	1			
6. Interpersonal	.253**	.351**	.231*	.367**	.287**	1		
7. Intrapersonal	.287**	.483**	.209*	.266**	.222*	.486**	1	
8. Naturalistic	.426**	.242	.558**	.536	.310**	.241*	.352**	1

Source: Compiled from survey data

Sub-hypothesis one: There is no significant level of Multiple Intelligences of Medical Doctors

Table5.6 Advancement levels of the doctors’ multiple intelligence domains

Multiple intelligence domain	Highly advanced		Advanced		Moderately advanced		Slightly advanced		Unadvanced	
	F	%	F	%	f	%	f	%	F	%
Verbal	2	1.97	37	36.27	47	46.07	16	15.69	Nil	Nil
Logical	22	21.57	47	46.07	24	23.53	9	8.83	Nil	Nil
Spatial	4	3.92	38	37.25	48	47.06	11	10.77	1	1
Kinesthetic	4	3.92	32	31.37	43	42.15	18	17.66	5	4.9
Musical	11	10.78	28	27.45	36	35.29	22	21.58	5	4.9
Interpersonal	12	11.76	41	40.19	41	40.19	7	6.86	1	1
Intrapersonal	5	4.9	40	39.21	46	45.09	10	9.80	1	1
Naturalistic	5	4.9	24	23.5	47	46.07	23	22.57	3	2.96

Source: Compiled from survey data

Table 5.6 shows the distribution of multiple intelligence profiles of doctors according to advanced levels. For comprehensive analysis frequency and percentage are calculated for the advanced levels of each multiple intelligence factors. As is clear from the table, there are doctors with all levels from unadvanced to highly advance in spatial-visual, kinesthetic-bodily, musical-rhythmical, interpersonal, intrapersonal and naturalistic intelligence domains. In the remaining intelligence domains, on the other hand, medical professionals have at least slightly advanced level and higher levels. The doctors with highly advanced levels do not have significant numbers in any intelligence domains. In the survey mathematical-logical has highest numbers following interpersonal intelligence domain.

Table 5.7 Descriptive Statistics of Multiple Intelligence Domains of the Medical Doctors

Multiple intelligences	Mean	Sd	Level
Logical/Mathematical	26.15	6.673	Advance
Interpersonal	24.68	6.392	Advance
Intrapersonal	22.37	5.617	Moderately Advance
Visual/Spatial	22.04	6.617	Moderately Advance
Bodily/kinesthetic	21.23	8.09	Moderately Advance
Verbal/ linguistic	20.96	5.615	Moderately Advance
Musical/rhythmical	20.60	6.306	Moderately Advance
Naturalistic	20.35	6.987	Moderately Advance

Source: Compiled from survey data

The obtained mean scores (table 5.7) of multiple intelligence domains suggested that doctors have advanced levels in logical- mathematical and interpersonal intelligence domains and moderate advancement levels in verbal-linguistic, visual- spatial, musical-rhythmical, bodily- kinesthetic and intrapersonal intelligence domains. None of the multiple intelligences are at highly advanced level and unadvanced level.

Table -5.8 Summary of One Sample T Test

Dimension of the Independent Variable	t	P value
Interpersonal Intelligence	7.389	.000
Mathematical Intelligence	2.943	.004
Intrapersonal Intelligence	3.846	.001
Spatial Intelligence	2.867	.005

Source: Compiled from survey data

As depicts in the table – 5.8 four intelligences are significant because significance values are lower than 0.05. It could be concluded that few intelligences such as Interpersonal, Mathematical and Logical, Intrapersonal and Spatial Intelligence are significantly high as they have a higher t -values. Since the outcome explains a significant level of intelligence, the sub- hypothesis one could be rejected and alternative hypothesis should be selected. It is concluded that there is a significant level of MI among doctors.

Table 5.9 Summary of Regression Coefficient

Multiple intelligences	Beta	P value
Verbal/ linguistic	.555	.000
Logical/Mathematical	.241	.000
Visual/Spatial	.579	.000
Bodily/kinesthetic	.446	.000
Musical/rhythmical	.577	.000
Interpersonal	.530	.000
Intrapersonal	.626	.000
Naturalistic	.647	.000

Source: Compiled from survey data

The linear regression analysis presented in Table 5.9 indicates that estimates of naturalistic, intrapersonal and Visual/Spatial are the best predictors of estimates of intelligence. In this sample, doctors have moderately advanced level of the two main predictors - naturalistic and intrapersonal intelligence.

Interference: Thus it is concluded that among the doctors there is a significant level of multiple intelligence domains. The three Howard Gardener’s MI domains - naturalistic, Intrapersonal and Visual/Spatial are the best predictors of estimates of doctor’s intelligence.

5.5.2. Relation between demographic Variables and MI

Sub-hypothesis two: Personal variables are not the good predictor of multiple intelligences

Results of independent t- test in table-5.10 show that p values for all the intelligence types are greater than .05 and .01. This means that there is no significant difference between male and female self-perceived MI.

One way ANOVA test is used to examine whether there is any significant relationship between gender, age, and multiple intelligences. The outcomes of the test reveal that the p values for all eight intelligences are greater than .05 and .01. Which

means that there is no significant difference between male and female doctors and junior and senior doctor's self-perceived multiple intelligences.

Table-5.10 Summary of Independent t- test & ANOVAs

Multiple intelligences	Gender		Age	
	T	value	F	P value
Verbal/ linguistic	-2.18	.829	1.952	.126
Logical/Mathematical	.853	.396	1.465	.229
Visual/Spatial	-1.029	.316	.222	.881
Bodily/kinesthetic	1.155	.259	1.961	.125
Musical/rhythmical	-.824	.420	1.879	.138
Interpersonal	.865	.398	1.266	.290
Intrapersonal	-.354	.727	.516	.672
Naturalistic	.847	.407	.625	.601

Source: Compiled from survey data

Interference: The results of t- test and one- way ANOVA reveals that p - values are greater than .001 and .05. So we could accept the sub- hypothesis two and it could be concluded that there is no significant relationship between personal variables - gender , age, and multiple intelligence.

5.5.3. Relation between Workplace Happiness and MI

Sub-hypothesis 3: There is no relationship between multiple intelligences and workplace happiness of medical doctors of North Bengal.

Table-5.11 reveals that doctors with highly advance in logical-mathematical, bodily -kinesthetic and interpersonal intelligence domains are at all levels of happiness .No doctors with verbal -linguistic, visual-spatial, musical-rhythmic and naturalistic intelligence domains are in the very unhappy group. Doctors with visual and intrapersonal intelligence domains are also not in the very happy group.

Table 5.11 Doctors' Multiple Intelligence Domains and Happiness According to Highly Advance Level

Level	MI domains	Verbal linguistic	Logical-Mathematical	Visual-spatial	Musical-rhythmical	Bodily-kinesthetic	Interpersonal	Intrapersonal	Naturalistic
Highly Advanced	VH	1	2	nil	1	1	1	nil	1
	H	1	11	1	2	7	6	3	1
	MH	nil	3	1	nil	2	1	nil	1
	UH	nil	3	nil	nil	1	1	nil	2
	VUH	nil	3	nil	nil	1	2	2	nil

Source: Compiled from survey data; Key: VH = Very high happiness, H=Happiness, MH = Moderately happy, UH = Unhappy, VUH = Very unhappy

Table-5.12 Parsons' Correlation between Workplace Happiness and Multiple Intelligences

Multiple Intelligence domains	Verbal - Linguistic	Logical-Mathematical	Visual-Spatial	Musical - Rhythmical	Bodily-Kinesthetic	Interpersonal	Intrapersonal	Naturalistic
Happiness								
Pearson correlation SING.(2-tailed)	-.111	-.038	.132	.108	.071	.108	-.192	.053
	.915	.702	.186	.4281	.448	.281	.94	.597

Source: Compiled from survey data

Pearson's Correlation has been used in order to assess the nature of the relationship between Multiple Intelligences and workplace happiness. The Pearson's Correlation values (table 5.12) are greater than 0.5 indicate that there is no association between multiple intelligences and workplace happiness and also statistically not significant at 5% significance level. No relation has been found between the variables and it could be inferred that multiple intelligences do not determine workplace happiness level of doctors.

As the significance value is greater than 0.05 we conclude that there is no significant association exists between the multiple intelligence domains and workplace happiness. It can be said that sub- hypothesis three should be accepted while alternative hypothesis should be rejected.

Interference: Pearson Correlation results are not statistically significant. This means that there is no relationship between multiple intelligences and workplace happiness of medical professional.

5.5.4 Discussion

The outcomes of Pearson correlation test demonstrated that there is a significant correlation among the eight multiple intelligence domains of medical doctors. Out of 28, there are no correlations above $r = .60$. This result is consistent with the view of Gardner (1983) that there are weak inter correlations among multiple intelligence domains (Kemal Ozgen et.al, 2010). Dr.R.Senathiraja's study (2013) also supports this view of Gardener. It revealed that the multiple intelligences abilities of the medical doctors are working reciprocally.

The result of one sample t- test showed that doctors owned multiple intelligences such as interpersonal, mathematical/logical, intrapersonal and spatial intelligence. This result also supports the view of Gardener that human beings possess multiple intelligences, not a single intelligence. Multiple intelligence abilities are needed for giving better healthcare service and quick diagnosis of diseases. The finding is partially consistent with the finding of Maryam Ansari et.al (2014) that interpersonal, naturalistic and mathematical/logical intelligence were at a significantly high level among medical students.

Gardner (1983) states that human capacities, abilities, preferences and the use of these capacities, abilities, will vary within any work environment. Advance level in interpersonal domain helps medical professionals to interact with patients. Their sensitivity to others needs, empathetic and sympathetic characters are very helpful in success in this profession. Medical doctors need knowledge both practical and theoretical which is embedded in human beings. Doctors with mathematical-logical intelligence domain are scientific thinkers; they deal with logical-thinking and problem-solving. Doctors having an advanced level of logical-mathematical

intelligence have developed the skills of analyzing, inducing, deducing, estimating, predicting, organizing, sequencing, questioning, and experimenting (Kemal Ozgen et.al.;2010).

The linear regression analysis indicated that naturalistic, intrapersonal and spatial intelligence are the best predictors of multiple intelligences among the medical doctors. This finding also not fully supports the findings of Maryam Ansari et.al (2014); who reported that naturalistic, logical/ mathematical and interpersonal intelligences were the best predictors of estimates of overall multiple intelligences of medical students. A probable clarification for the variation in this result is that their study was carried out on medical students, and looked for the verbal and logical intelligence required for the learning process. Naturalistic intelligence is the predictor of the medical profession but in this sample doctors' do not have an advanced level of intelligence in this domain. To be successful in this profession doctors need to develop and nurture their naturalistic intelligence.

The results of the relationship between multiple intelligences and personal variables indicated that there is a positive but insignificant relation exists between gender, age, and multiple intelligences. Maryam Ansari et.al. (2014) also observed that there was no significant difference between multiple intelligences of male and female medical students. But contradicted the result of many studies (Chua Yan Piaw and ZuraidahMohd Don, 2014 and GulapShahzada et.al.2011) that the females possessed greater verbal-linguistic ability than the males, while the males possessed greater logical-mathematical ability than their counterparts and increasing age was indirectly associated with decreasing visual-spatial ability .The possible reason for the differences in this results was that this study and Maryam Ansari et.al. (2014) study was related to medical professionals i.e. doctors and medical students. Who looks after the patient's health and they must be aware of their own health. So with increasing age, doctors' spatial ability is not decreasing significantly. In our country generally bright and intelligence, individual opt for this profession and irrespective of the gender they inculcate and nurture their abilities.

The study results clearly indicate individual differences among the doctors in multiple intelligence domains. In the light of this fact, doctors should be provided with opportunities to discover not only their dominant intelligence domains but also

their potentials and abilities in their non-dominant intelligence domains. In the study, no relation has been found between multiple intelligence domains and workplace happiness.

5.6. Findings Related to the Relationship between MBTI, MI and Workplace Happiness

Research Hypothesis three: There is no difference in the combination of personality types and intelligence factors between doctors who are very happy in their profession and doctors who are very unhappy in their profession.

Table-5.13 Personality Type and MI of Very Unhappy and Very Happy Doctors

Very Unhappy	MI	Very happy	MI
ENTP	Interpersonal	ESTJ	Interpersonal
ENFP	Logical/Mathematical	ENFP	Interpersonal
ENFJ	Verbal/linguistic	ESFP	Body/Kinesthetic And Logical/Mathematical
ESFJ	Rhythmic	ESFJ	Logical/Mathematical
INTP	Logical/Mathematical	INTJ	Logical/Mathematical
INFJ	Logical/Mathematical	INFP	Interpersonal and Logical/Mathematical
ISFP	Verbal/linguistic	ISTJ	Rhythmic
ISFJ	Logical/Mathematical	ISFJ	Verbal/linguistic

Sources: Compiled from survey data

In table -5.13 we see that at both the level of happiness the combination of personality type and MI of doctors differ. This means that the research hypothesis three is rejected. There is a difference in the combination of personality types and intelligence factors between doctors who are very happy in their profession and doctors who are very unhappy in their profession. ISFJ, ENFP, ESFJ are Common personality types in both very happy and very unhappy doctors. The common personality types in both very happy and very unhappy doctors have different multiple intelligence factors. ISFJ with verbal-linguistic intelligence, ESFJ with

logical/mathematical and ENFP with interpersonal intelligence are happy but ISFJ with logical/mathematical, ESFJ with rhythmic and ENFP with logical/Mathematical intelligence are unhappy. This indicates that personality type alone could not predict workplace happiness. Factors of MI also have an influence on workplace happiness.

None of the doctors both in the very happy and very unhappy sections exhibit spatial and intrapersonal intelligence factors. Also, none of the very happy doctors exhibit naturalistic intelligence (which is portrayed as being a precursor to having intelligence for medicine, environment, and natural sciences); so there may be a difference between a good/efficient doctor and a doctor happy with his position in life.

Interference : Results reveal that there is the difference in the combination of personality types and intelligence factors between doctors who are very happy in their profession and doctors who are very unhappy in their profession. Thus it can be said that the combination of personality type and multiple intelligence factors affect workplace happiness at work of the medical doctors.

5.6.1. Discussion

In analyzing the relationship between MBTI, MI and Workplace Happiness we find that there is the difference in the combination of personality types and intelligence factors between doctors who are very happy in their profession and doctors who are very unhappy in their profession. Thus it can be said that the combination of personality type and multiple intelligence factors affect happiness at work of the medical doctors. This indicates that personality type alone could not predict workplace happiness. Factors of MI also have an influence on happiness.

5.7. Conclusion

The research hypothesis that there is no difference in the combination of personality types and intelligence factors between doctors who are very happy in their profession and doctors who are very unhappy in their profession is not tenable. The demographic variables (Gender and age) are not significant in determining MI.

Myers and Briggs Type indicators and Gardeners' MI could not predict workplace happiness of medical doctors. The combination of personality type and multiple intelligence factors have an effect on happiness at work of the medical doctors.

Chapter - Six

Analysis of Relationship between Locus of Control, Emotional Intelligence and Workplace Happiness

6.1. Introduction

The more important determinant of psychological wellbeing other than any mental and emotional factor is the locus of control (Ross and Sastry in Raminder Kaur and Dr. Sonia Kapur ,2015) .It plays the most important role in various aspects of human behavior such as self-control, social adjustment, independence, expectancy, achievement motivation and success-orientation (Ogunsanwo et.al. 2014).

Emotional intelligence is an important factor of success in human life and also in work life. Research findings have shown that emotional intelligence has been correlated with life satisfaction, quality of work life and many social aspects (Ogunsanwo et.al. 2014) .It is gaining importance in education, business, and social science research.

The analysis of the relationship between Locus of control, Emotional Intelligence and Workplace happiness would help to know the relationship between these variables and to predict doctors' satisfaction level. This, in turn, helps the administrator to retain efficient and effective employees in the organization

6.2 Primary Objective

4. To study the relationship between Locus of Control, Emotional Intelligence, and Workplace Happiness of the doctors of North Bengal medical college.

6.2.1 Sub- Objectives

1. To identify the type of locus of control (i.e. internal or external) present in medical doctors.
2. To identify the relationship between locus of control (i.e. internal or external) and biographic /demographic variables.
3. To identify the relationship between locus of control (i.e. internal or external) and workplace happiness.
4. To study the level of emotional intelligence of medical doctors who work at North Bengal medical college.

5. To identify the relationship between emotional intelligence and biographic variables.
6. To study the relationship between workplace happiness and emotional intelligence, and workplace happiness and components of emotional intelligence of medical doctors of North Bengal medical college.
7. To study the emotional intelligence profiles of doctors according to the locus of control ((i.e. internal or external).
8. To study the relationship between emotional intelligence, its different components and locus of control e ((i.e. internal or external) of medical doctors of North Bengal.

6.3. Research Hypothesis

H₀₄: There is a relation between Locus of Control (i.e. internal or external), Emotional Intelligence and Workplace Happiness.

6.3.1 Sub- Hypotheses

The following statistical hypotheses (sub) have been considered for analysis in this chapter:-

6.3.2 Related to Locus of Control and Workplace Happiness

- 1: There is a difference in the degree of internality and in the degree of externality (locus of control) on the basis of demographic variables of medical doctors of North Bengal.
- 2: There is a difference in doctors' workplace happiness on the basis of Locus of Control.
- 3: There is a relationship between internal locus of control and workplace happiness of medical doctors of North Bengal.
- 4: There is a relation between external locus of control and workplace happiness of medical doctors of North Bengal.
- 5: Locus of control (internal and external) is a good predictor of workplace happiness.

6.3.3 Sub hypotheses related to Emotional Intelligence and Workplace Happiness

1. Medical doctors have a high level of emotional intelligence.
2. There is a difference in emotional intelligence on the basis of biographic /demographic variables (gender, age, education, and experience) of medical doctors of North Bengal.
3. There is a difference in workplace happiness on the basis of emotional intelligence levels of medical doctors of North Bengal.
4. There is a relation between workplace happiness and emotional intelligence, and emotional intelligence has an impact on workplace happiness
5. There is a relation between workplace happiness and self-awareness and self-awareness has an impact on workplace happiness.
6. There is a relation between workplace happiness and self-regulation and self-regulation has an impact on workplace happiness.
7. There is a relation between workplace happiness and self-motivation and self-motivation has an impact on workplace happiness.
8. There is a relation between workplace happiness and social -awareness and social-awareness has an impact on workplace happiness.
9. There is a relation between workplace happiness and social- skills and social- skills have an impact on happiness.

6.3.4 Sub- hypotheses related to Emotional Intelligence and Locus of Control

- 1: There is a difference in emotional intelligence on the basis of locus of control (internal and external).
- 2: There is a relationship between emotional intelligence, its components, and internal locus of control.
- 3: There is a relationship between emotional intelligence, its components, and external locus of control.

6.4 Findings Related to the Relationship between Locus of control and Workplace Happiness

This section deals with the analysis and interpretations related to the objectives and hypotheses of the relationship between locus of control and workplace happiness.

6.4.1. Locus of control of Medical Doctors

The table 6.1 reveals that a greater percentage of the respondents have an internal locus of control (81.38%). Out of 102 respondents, 83 are internal and rests of the doctors have an external locus of control. Among the male doctors, 84% are internal and 62% of female doctors have an internal locus of control.

Table 6.1 Frequency and Percentage Analysis of Loc of Doctors

Loc	Frequency	Percentage
Internal Loc(trait)	83	81.38
External Loc (trait)	19	18.62

Source: Compiled from survey data

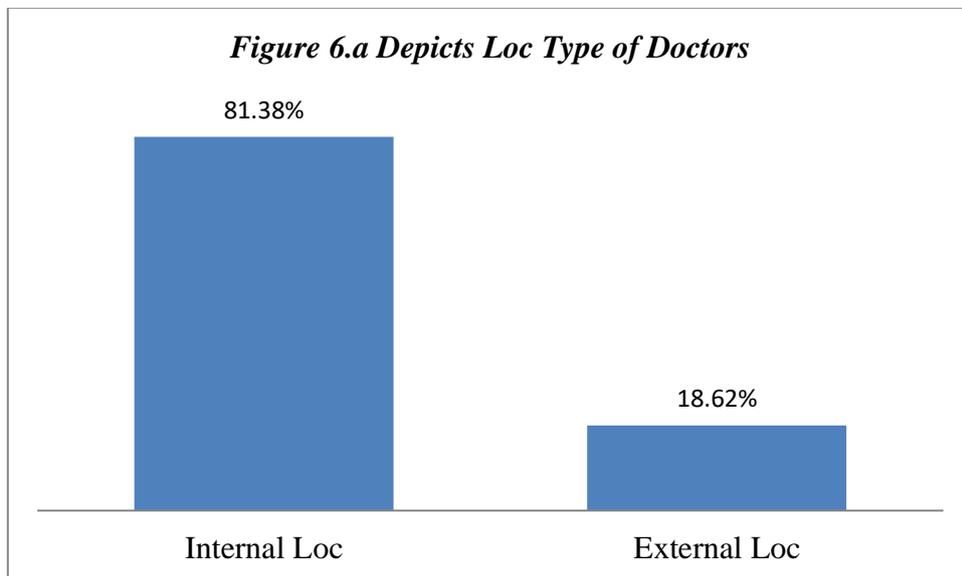


Table 6.2 Descriptive Statistic of Loc (Internal & External)

	No.	Minimum	Maximum	Mean	Std. deviation	Skewness	Kurtosis
Internal	102	3	40	26.3431	8.39672	-1.074	.474
External	102	1	38	16.61	6.56560		

Source: Compiled from survey data

Table 6.2 shows the mean and standard deviation of the locus of control. Internal locus of control has a mean of 26.34 and a standard deviation of 8.39 and external locus of control has a mean of 16.61 and standard deviation of 6.61.

6.4.2. Demographic Variables and Locus of control

Table 6.3 reveals that out of the internal type of Loc of doctors 88% are male doctors and out of male doctors 84% are internal. 62% of female doctors have an internal locus of control and 38% female doctors have an external type of Loc.

Among the young doctors 90% (out of 62) have internal locus of control and the percentage of the type of locus of control (internal and external) among oldest doctors is same (i.e. 3 in both type; out of 6). Internality is the dominant locus of control of the doctors within the age range of 40 years.

As regards to academic qualification doctors with bachelor degree have the highest percentage of internality (83%) compared to those who have post graduation degree (80%).

In case of job experience, doctors with 8-11 years in service are more of the internal type of locus of control (87%). Only 63% of doctors having job experience more than eleven years are internal. Doctors who are new in the service are more of the internal type of locus of control.

Table 6.3 Frequency and Percentage Analysis of Locus of control of Doctors Based on Demographic Variables

Variables	Internal Loc	External Loc
Gender:		
Male	73 (87.95%)	13 (68.42%)
Female	10(12.05%)	6 (31.58%)
Age Range:		
25-30	56 (67.46%)	6 (31.58%)
31-40	16 (19.27%)	3 (15.78%)
41-50	8 (9.63%)	7 (36.86%)
>50	3 (3.64%)	3 (15.78%)
Education Standard:		
Bachelor(Graduate)	35 (83.33)	7(16.67)
Master (Postgraduate)	48 (80%)	12 (20%)
Years as Doctors		
1-3	53 (86.88%)	8(13.12%)
4-7	11 (78.57)	3 (21.43%)
8-11	7 (87.5%)	1 (12.50%)
> 11	12 (63.15%)	7(37.85%)

Source: Compiled from survey data

Sub- hypothesis one : There is a difference in the level of locus of control (internal and external) on the basis of demographic variables of medical doctors of North Bengal.

6.4.3. Relationship between Demographic Variables and Internal Locus of control

6.4.3.1. Internal Locus of control of Medical Doctors Based on Gender Variation

Table-6.4 shows that in the sample mean of internal locus of control scores for female and male doctors are 2.3875 and 2.6791 respectively. At 95% confidence interval, in the population the upper limit of the mean of internal locus of control for female doctors is 2.9818 and for male doctors is 2.8464. In the population, the lower limit of the mean of internal locus of control for female doctors is 1.7932 and for male doctors is 2.5118. The male respondents have a higher score of internal locus of control than female respondents.

Table 6.4 Mean of Internal Loc Based on Demographic Variables

Demographic Variables	No.	Mean	Sd	Std error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower bound	Upper Bound		
Gender								
Female	16	2.3875	1.11527	.27882	1.7932	2.9818	.60	3.80
Male	86	2.6791	.78036	.08415	2.5118	2.8464	.30	4.00
Age								
25-30	62	2.7355	.79054	.10040	2.5347	2.9362	.30	3.80
31-40	19	2.6789	.77070	.17681	2.3075	3.0504	.90	4
41-50	15	2.1733	1.08263	.27953	1.5738	2.7729	.60	4
>50	6	2.5833	.70261	.28684	1.8460	3.3207	1.40	3.3
Education								
Graduate	42	2.6071	.83356	.12862	2.3474	2.8669	.30	3.60
Post Graduate	60	2.6517	.85400	.11025	2.4311	2.8723	.50	4
Experience								
1-3	61	2.7197	.77585	.09934	2.5210	2.9184	.40	3.80
4-7	14	2.5000	1.08557	.29013	1.8732	3.1268	.30	4
8-11	8	2.8625	.32043	.11329	2.5946	1.1304	2.30	3.3
>11	19	2.3579	.96742	.22194	1.8916	2.8242	.60	4

Source: Compiled from survey data

In the table 6.5 the result of ANOVA shows that there is no significant difference in the mean of internal Loc of female and male doctors; because the calculated p-value (.205) is higher than the .05 level of significance. Thus we infer that there is no significant difference in internal Loc based on gender.

Table 6.5 One-Way ANOVA Showing Relationship between Demographic Variables and Internal Locus of control

		Sum of Squares	df	Mean Square	F	Sig
GENDER	Between Groups	1.147	1	1.147	1.629	.205
	Within Groups	70.420	100	.704		
	Total	71.567	101			
Age	Between Groups	3.875	3	1.292	1.870	.140
	Within Groups	67.691	98	.691		
	Total	71.567	101			
Education	Between Groups	.049	1	.049	.068	.794
	Within Groups	71.518	100	.715		
	Total	71.567	101			
Experience	Between Groups	2.565	3	.855	1.214	.309
	Within Groups	69.001	98	.704		
	Total	71.567	101			

Source: Compiled from survey data

6.4.3.2 Internal Locus of control of Medical Doctors Based on Age Variation

The table no. 6.4 reveals that due to the variation of age of doctors there is very little difference in mean of internal Loc. In the sample who is aged between 25-30 years, mean of internal Loc of that group is 2.7355, those who are under age group of 31-40 years the mean is 2.6789, the mean is 2.1733 for under age group of 41-50 years and 2.5833 for those who are above fifty years.

In table -6.5 (ANOVA Analysis based on age) it is observed that there is no significant difference in the mean of internal locus of control scores of doctors having a different age group in the profession. This is because significant value calculated (i.e. .140) is greater than ALFA=0.05. Thus, it is concluded that there is no significant difference in the degree of internal Loc of young and aged medical doctors.

6.4.3.3 Internal Locus of control of Medical Doctors Based on Educational Standard Variation

As recorded in the table -6.4, in the sample, it is observed that medical doctors who have post graduation degree have high scores of internal locus of control. The mean of internal locus of control scores of those who have post graduation degree in medical science is 2.6517 and 2.6071 for those who have the bachelor degree.

The ANOVA Analysis based on education standard (table 6.5) reveals that significant value calculated (i.e. .794) is greater than ALFA=0.05. Thus, it is concluded that there is no significant difference in the mean of internal Loc scores of medical doctors with the variation in the level of education standard achieved.

6.4.3.4 Internal Locus of control of Medical Doctors Based on Experience Variation

Descriptive statistics (table 6 .4) mean and SD show that doctors with one to three years of experience in service have a higher mean of internal Loc scores (2.7197) than those who have experience of more than eleven years.

ANOVA is conducted to test the equality of mean of the sample on the basis of experience in service. The result of one-way ANOVA (table-6.5) shows that there is no significant difference amongst the mean of the variable based on experience; because the calculated p-value (.309) is greater than Alpha = .05 level of significance. We infer that that there is no significant difference in internal Loc based on experience in service.

6.4.4 Relation between Demographic Variables and External Locus of control

6.4.4.1 External Locus of control of Medical Doctors Based on Gender Variation

Table-6.6 shows that in the sample mean of external locus of control scores of female and male doctors are 1.7313 and 1.6477 respectively. At 95% confidence interval, in the population, the upper limit of the mean of external Loc scores of

female doctors is 2.1102 and of male doctors is 1.7869. In the population, the lower limit of the mean of external locus of control scores of female medical doctors is 1.3523 and for male medical doctors is 1.5084. The female respondents have higher scores of external Loc than male respondents.

Table 6.6 Mean of External Loc Based on Demographic Variables

Demographic Variables	No.	Mean	Sd	Std error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower bound	Upper Bound		
Gender		1.7313	.71107	.17777	1.3523	2.1102	.40	2.80
Female	16	1.6477	.64952	.07004	1.5084	1.7869	.05	3.80
Male	86							
Age		1.6210	.67935	.08628	1.4484	1.7935	.05	3.8
Upto30	62	1.4474	.66447	.15244	1.1271	1.7676	.50	2.8
31-40	19	1.9033	.47564	.12281	1.6399	2.1667	.95	2.5
41-50	15	2.1417	.45543	.18593	1.6637	2.6196	1.30	2.6
>50	6							
Education		1.5464	.71281	.10999	1.3243	1.7686	.05	3.80
Graduate	42	1.7408	.6447	.07842	1.5839	1.8978	.50	2.90
Post Graduate	60							
Experience							.05	3.8
1-3	61	1.6320	.68757	.08803	1.4559	1.8081	.60	2.9
4-7	14	1.4357	.63380	.16939	1.0698	1.8017	.50	2.5
8-11	8	1.6500	.64973	.22971	1.1068	2.1932	.95	2.6
>11	19	1.9237	.52291	.11996	1.6716	2.1757		

Source: Compiled from survey data

To test the equality of mean one way ANOVA is conducted. In table 6.7 the result of ANOVA shows that there is no significant difference between the mean of external Loc of female and male doctors; because the calculated p-value (.642) is greater than the .05 level of significance. We can infer that there is no significant difference in external Loc based on Gender.

Table 6.7 One-Way ANOVA showing relationship between Demographic Variables and External Locus of control

		Sum of Squares	Df	Mean Square	F	Sig
GENDER	Between Groups	.094	1	.094	.217	.642
	Within Groups	43.444	100	.434		
	Total	43.538	101			
Age	Between Groups	3.234	3	1.078	2.621	.055
	Within Groups	40.305	98	.411		
	Total	43.538	101			
Education	Between Groups	.934	1	.934	2.192	.142
	Within Groups	42.604	100	.426		
	Total	43.538	101			
Experience	Between Groups	2.074	3	.691	1.634	.186
	Within Groups	41.464	98	.423		
	Total	43.538	101			

Source: Compiled from survey data

6.4.4.2. External Locus of control of Medical Doctors Based on Age Variation

The table -6.6 reveals there is very little difference in the mean score of external Loc having different age groups. In the sample who are aged between 25-30 years, the mean score of external Loc of those group are 1.6210, those who are under age group of 31-40 years is 1.4464, 1.9033 for under age of 41-50 years and 2.1417 for those above fifty years.

In table -.6.7, (i.e. ANOVA Analysis based on age) it is observed that there is no significant difference in the mean score of external Loc of doctors having the different age group in the profession. This is because significant value calculated i.e. .055 is greater than ALFA=0.05. Thus, it is concluded that there is no significant difference in the degree of external Loc of young and aged medical doctors.

6.4.4.3 External Locus of control of Medical Doctors Based on Educational Standard Variation

As recorded in the table No.6.6, in the sample, it is observed that medical doctors who have post graduation degree have high scores of external Loc. The mean score of those who have post graduation degree in medical science is 1.7408 and 1.5464 for those who have a bachelor degree.

The ANOVA Analysis based on education standard (table 6.7) reveals that significant value calculated (i.e. .1420) is greater than ALFA=0.05. Thus, it is conclude that there is no significant difference in the mean score of external Loc of medical doctors with the variation in the level of education standard achieved. We infer that with the acquisition of higher education degree external loc does not increase.

6.4.4.4 External Locus of control of Medical Doctors Based on Experience Variation

Descriptive statistics (table 6.6) mean and SD show that doctors who have more than eleven years of experience in service have a higher mean of external Loc (1.9237) than those who have experience of one to three years.

ANOVA is conducted to test the equality of mean of the sample. The result of one-way ANOVA (table-6.7) shows that there is no significant difference amongst the mean of the variable based on experience; because the calculated p-value (.186) is higher than an Alpha=.05 level of significance. We infer that that there is no significant difference in internal Loc based on experience in service.

Inference: We conclude that our experiment does not provide evidence that the difference in internal Loc and external Loc on the basis of demographic variables is statistically significant in the population. Thus we reject the sub hypothesis one that there is a difference in the degree of internality and in the degree of externality (Locus of control) on the basis of demographic variables of medical doctors of North Bengal.

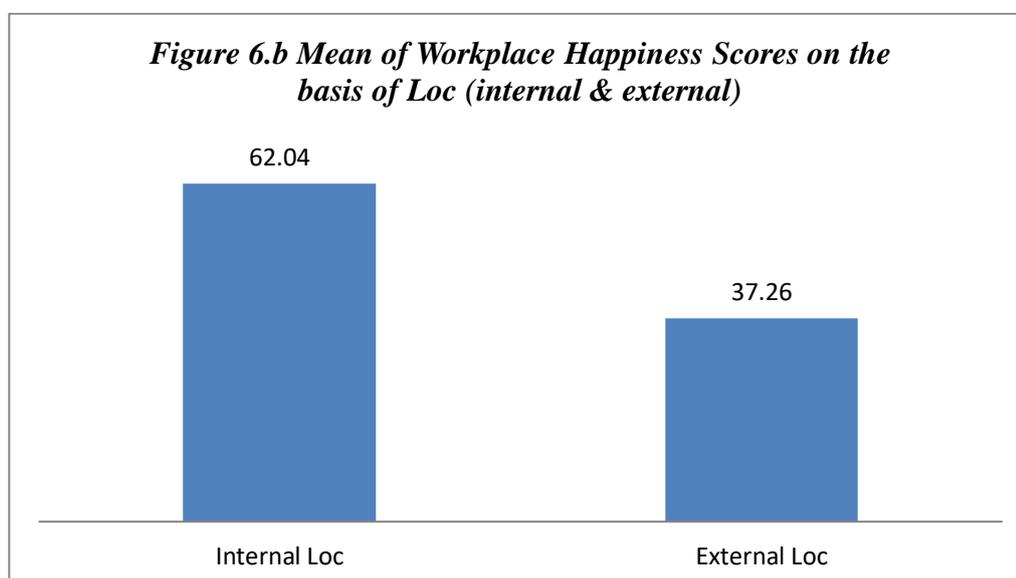
6.4.5 Relation between Workplace Happiness and Locus of control

Sub-hypothesis two: There is a difference in doctor's happiness on the basis of Locus of Control.

Table - 6.8 Mean of Workplace Happiness of Doctors Based on Loc Type (Internal and External)

	No	Mean	Std deviation	Std Error	95% confidence Interval		Minimum	Maximum
					Lower Bound	Upper Bound		
Internal Loc	83	62.0425	15.94082	1.74973	58.5618	65.5233	28.92	99.15
External Loc	19	37.2674	28.74534	6.59463	23.4126	51.1222	1.56	79.20
Total	102	57.4275	21.15484	2.09464	53.2723	61.5828	1.56	99.15

Source: Compiled from survey data



In table 6.8 the mean of workplace happiness scores of internal Loc is 62.04 and for external Loc is 37.26. At 95% confidence interval, in the population, the upper limit of the mean of workplace happiness scores for internal Loc is 65.52 and for

external Loc is 51.12. In the population, the lower limit of the mean of workplace happiness scores for internal Loc is 58.56 and for external Loc is 23.41.

From the table - 6.9 (i.e. ANOVA analysis based on Loc type), we find that the probability calculated i.e. (.000) is less than ALFA= 0.05. Hence, we conclude that our experiment provides evidence that the difference in the mean of workplace happiness of doctors according to internal Loc and external Loc is statistically significant in the population.

Table 6.9 ANOVA Analysis Based on Loc Type Variation

Sources of Differences	Sum of Squares	Df	Mean square	F	Sig.[=0.05]
Between Groups	9489.963	1	9489.963	25.575	.000
Within Group	35710.301	100	357.103		
Total	45200.264	101			

Source: Compiled from survey data

Inference: Our experiment provides evidence that there is a difference in doctors' workplace happiness on the basis of Locus of control or doctors with an internal Loc is happier than the doctors with an external Loc.

Sub-hypothesis three: There is a relationship between internal locus of control and workplace happiness of medical doctors of North Bengal.

Sub-hypothesis four: There is a relationship between external locus of control and workplace happiness of medical doctors of North Bengal.

Table 6.10 Summary of Regression Analysis

Variables	R	R ²	Adjusted R ²	R ² change	F	Durbin-Watson	Vif
Internal Loc	.429	.184	.176	.184	22.591**	2.001	1
External Loc	-.058	.003	-.007	.003	.343	1.971	1

Source: Compiled from survey data, Dependent variable workplace happiness.

In table 6.10 it can be seen that calculated value of r is .429 for internal Loc. This indicates that there is a positive relationship between internal Loc and workplace

happiness of doctors. The R square value of .184 indicates that 18% of the variance in workplace happiness is due to doctors' Loc (Internal). F statistic also shows that level of significance is less than .05 for internal Loc. For external Loc F statistics is not significant (sig. value .343 is greater than .050), we can conclude that external Loc has no impact on workplace happiness.

Pearson's Correlation has been used in order to assess the nature of the relationship between workplace happiness and Loc. Table- 6.11 shows that there is a significant ($r=.429$, $n=102$, $p<.000$ single tailed) positive correlation between internal Loc and workplace happiness. In behavioral sciences correlation coefficients of $r = .10$, $r =.30$ and $r =.50$ are considered as small, medium and large coefficients respectively [Cohen (1988) Gravetter & Forzano (2009) and Green & Salkind (2003) in Kathungu Beatrice Mwathi (2010)]. Pearson correlation between internal Loc and workplace happiness is $r=.429$ which is close to $r= .5$, therefore, it reveals a strong positive relationship between the two variables.

Table- Table 6.11 Correlation between Workplace Happiness and the Type of Loc (i.e. Internal or External)

Happiness	Pearson Correlation	Sig.(2 tailed)
LOC		
Internal	.429**	.000
External	-.058	.560

Source: Compiled from survey data, Correlation is significant at the.001 level.

The correlation between external Loc and workplace happiness is found a negative value and insignificant relation ($r =-.058$, $n=102$, $p>.560$, sig 2 tailed). As the significance value is greater than 0.01 for external Loc, we can say that there is a negative relation between workplace happiness and external Loc but this relation is statistically not significant.

Inference: Analysis of data proves that there is a positive correlation between internal Loc and workplace happiness of the doctors. The sub-hypothesis four is rejected and the alternative hypothesis is accepted which states that there is no significant relation between external Loc and workplace happiness of the doctors of the medical college of North Bengal.

Sub-hypothesis five: Locus of control (Internal and internal) is a good predictor of workplace happiness.

Table 6.12 Loc Type (i.e. Internal or External) Profiles of Very happy and Very Unhappy Doctors

LOC Type	Very Happy	Happy	Moderate	Unhappy	Very Unhappy
Internal	10	36	28	9	Nil
External	Nil	5	5	1	8

Source: Compiled from survey data

In the above table 6.12, we see that all the very happy doctors of the survey have an internal Loc. In the very happy group, there are no doctors who have an external Loc. They are all in the very unhappy group. Hence, from this table, we can also conclude that our experiment provides evidence that internal Loc is a good predictor of workplace happiness. In the survey the number of Internal Loc type of doctors is high; so this type of Loc may be dominant in all workplace happiness groups.

Inference: We partially accept the sub- hypothesis five and conclude that internal Loc is a good predictor of workplace happiness.

6.4.6 Discussion

The objectives of this section of the research are to identify the Loc type of medical doctors who work at North Bengal medical college and to explore the relationship between workplace happiness and type of Loc (internal and external). The research finding reveals that there exists more of the internal type of Loc among medical doctors. The one-way ANOVA analysis shows that the biographic variables (gender, age, education and experience in service) studied in the research have no significant effect on Loc type (internal and external). This finding is consistent with the result of Lakshman Vijayashreea and Mali Vishalkumar Jagdishchandrab (2011). Their results showed that there was no significant variance in Loc type according to gender and education but did not match with the result that age had an effect on internal Loc. Sandra Gildea (2012) also reported that there was no significant difference in internal / external or exaggerated internal Loc on the basis of gender.

The result of ANOVA indicates that doctors with internal Loc (mean of happiness 62.04) are happier than the doctors with external Loc (mean of happiness 37.26.). Pearson Correlation Coefficient is applied to explain the strength of the relationship between workplace happiness and Loc. The result of correlation shows that internal Loc is positively related to happiness and external Loc has insignificant negative relation with happiness. This suggests that doctors with internal Loc are happier than external Loc. The findings related to the relationship between happiness and locus of control are consistent with Rotter (1966) and inconsistent with Lindiwe M. Sindane (2011). Findings suggested that individuals with internal Loc are happier because of the way they prefer to analyze experiences as they tend to repress their failures and remember successes. Whereas those with external Loc verified less need to suppress because they accredited their failures to external forces (Rotter, 1966). Argyle (2001) also opined that individuals with internal Loc perceived their control over events and considered less to negative events while externals blame to fate or external force for negative events (Lindiwe M. Sindane,2011). An individual with internal Loc believes their inner power and they can control future (Seyede Golafrouz Ramezani and Abbas Gholtash1,2015).

6.5 Findings related to the Relationship between Workplace Happiness and Emotional Intelligence

This section deals with the analysis and interpretations related to the objectives and hypotheses of the relationship between workplace happiness and emotional intelligence.

6.5 .1 Level of Emotional Intelligence

Table 6.13 Level of EI and Interpretation

Class interval of the score	Upto 300	301-400	401- 500
Interpretation of the score	Low	Moderate	High

Source: Compiled from survey data

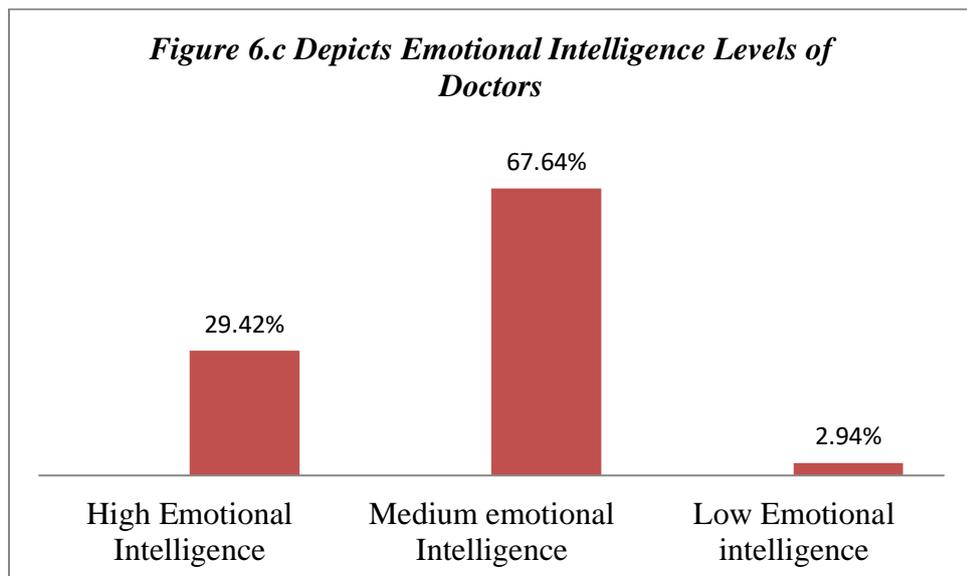
LINAC EI scale measures EI which uses a 500 point scoring scale. The maximum one respondent can score is 500 and the minimum possible score is 100. Up to 300 scores are considered as low and above 400 as high and 301 to 400 as a medium level of EI.

The levels of EI and its all five components are shown in table-6.14. The table reveals that out of 102 respondent 30 (29.41%) have a high EI, 67% have a medium and 3(2.94%) have a low level of EI. A greater percentage of the respondents have a medium level of EI. Doctors have a moderate level in all five components of EI, accept social awareness.57% of doctors have a high level of social- awareness. In other four dimensions of EI (self- awareness, self -regulation, self- motivation and social skill) they have a medium level of EI.

Table 6.14 Levels of EI of Doctors

<i>Variables</i>	<i>High</i>	<i>medium</i>	<i>Low</i>
<i>EI</i>	29.42%	67.64%	2.94%
<i>Self Awareness</i>	36.28%	60.78%	2.94%
<i>Self Regulation</i>	36.28%	57.84%	5.88%
<i>Self Motivation</i>	27.46%	56.86%	15.68%
<i>Social Awareness</i>	56.86%	37.26%	5.88%
<i>Social skill</i>	46.07%	51.95%	5.88%

Source: Compiled from survey data



The average of EI and its components, and the level of EI of doctors on the basis of scale are shown in table-6.15. The minimum score of EI is 290 and maximum

score of EI is 454. The mean of social -awareness scores is highest (78.91) among all the components of EI and ranked first. Almost 57% of doctors have a high level in this dimension.

Table-6.15 Descriptive statistics of EI and Its Components

Variables	Mean	SD	Maximum	Minimum	Skewness	Kurtosis	Level	Rank
<i>EI</i>	381.90	35.39	454	290	-.306	.166	Medium to high	–
<i>Self Awareness</i>	76.07	7.334	88	48	-.598	1.062	Medium to high	4
<i>Self Regulation</i>	76.588	10.65	100	50	.156	-.077	Medium to high	3
<i>Self Motivation</i>	72.33	11.23	96	44	-.344	-.161	Medium to high	5
<i>Social Awareness</i>	78.91	9.69	96	78.91	-.525	-.164	Medium to high	1
<i>Social skill</i>	77.99	10.20	100	42	-.556	1.532	Medium to high	2

Sources: Compiled from Survey Data

Hypothesis Testing

Sub-hypothesis one: Medical doctors have a high level of EI

Table 6.16 One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean	Skewness	Kurtosis
EMOTION	102	381.9020	35.39746	3.50487	-.306	.166

Source: Compiled from survey data

From the Table No 6.16, it can be observed that mean of medical doctors' EI scores is 381.902. At 95% confidence interval; the upper limit of EI of this population is 38.85 and the lower limit is 24.9492 (table 6.16).

Table 6.17 One-Sample Test of EI (350.5)

	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
EMOTION	9.102	101	.000	31.90196	24.9492	38.8547

Source: Compiled from survey data

To test the hypothesis that medical doctors have a high-level EI, one sample t-test is used. The obtained t is significant, $t(101) = 9.102$, $p = .000$ (table 6.17). Since the p-value is less than .05, we can say that the population mean is not equal to the sample mean; hence the research hypothesis is accepted.

Inference: In table 6.16 we see that obtained mean of EI (381) is higher than assumed mean and sig. value is less than alpha value. It means that doctors of North Bengal medical college have a high level of EI and the sub-hypothesis one which postulates that doctors expressed a high level of EI is accepted.

6.5.2 Demographic Variables and Emotional Intelligence

Sub-hypothesis two; There is a difference in EI on the basis of demographic variables (gender, age, education, and experience) of doctors of North Bengal medical college.

6.5.2.1 Level of Emotional Intelligence of Doctors' Based on Demographic Variables

The table 6.18 reveals that among the female doctors 25% (4/16) are highly emotional and 68.75% of female doctors have a moderate level of EI. A great percentage of male doctors are moderately intelligent.

Table 6.18 Frequency and Percentage Analysis of EI of Doctors Based on Demographic Variables

Variables	Low	Medium	High
Gender:	(33.33%)	11(15.95%)	4 (13.33%)
Female	2 (66.67%)	58(84.05 %)	26 (86.67%)
Male			
Age Range:			
25-30	Nil	46(66.66%)	16(53.53%)
31-40	1(33.33%)	8(11.59%)	10 (33.33%)
41-50	2(66.37%)	10(14.49%)	3(10%)
>50	Nil	5(7.26%)	1 (3.34%)
Education standard:			
Bachelor (Graduate)	NIL	32(46.37%)	10(33.33%)
Master(postgraduate)	3(100%)	37 (53.63%)	20 (66.67%)
Experience	1(3.33%)	44 (63.76%)	16(53.34%)
1-3	I (3.33%)	7(10.14%)	6 (20%)
4-7	Nil	4(5.79%)	4(13.33%)
8-11	1(3.34%)	14(20.31%)	4(13.33%)
>11			

Source: Compiled from survey data

Out of the young doctors, 53.53% (table-6.18) have a high level of EI. There is no young and old doctor in low EI group. Only 3.34% of aged doctors have a high level of EI. In the survey maximum numbers of respondents are young, so they are dominant in all EI groups.

As regards to academic qualification, postgraduate doctors are highly emotionally intelligent. The percentage is 66.67% (table-6.18). In the group of low EI, there are no doctors with bachelor degree. Among the bachelor doctors, 46.37% have a medium level of EI. In the survey maximum respondents have a master degree, so doctors with the highest degree dominate in all three groups of EI.

In case of job experience, the percentage of junior doctors in high EI group is 53.34 and only 13.33% senior doctors are in this group (table-6.18). In the survey maximum numbers of respondents are young, so they are also dominant in medium and low groups.

6.5.2.2 Variance in the Level of Emotional Intelligence Based on Gender Variation

Table 6.19 Mean of EI of Doctors Based on Gender

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Female	16	368.7500	40.56189	10.14047	347.1361	390.3639	290.00	446.00
Male	86	384.3488	34.05697	3.67246	377.0470	391.6507	290.00	454.00
Total	102	381.9020	35.39746	3.50487	374.9492	388.8547	290.00	454.00

Source: Compiled from Survey data

Table 6.19 shows that in the sample mean of EI scores of female and male doctors are 368.75 and 384.3488 respectively. At 95% confidence interval, in the population, the upper limit of the mean of EI of female doctors is 390.36 and of male doctors is 391.65. In the population, the lower limit of the mean of EI scores for female medical doctors and for male medical doctors are 347.13 and 377.04 respectively.

From the table -6.20, (i.e. ANOVA analysis based on gender variation), it can be observed that the probability calculated (i.e. .106) is greater than ALFA= 0.05. Hence, we can conclude that our experiment does not provide evidence that the difference between the mean of EI of female and male medical doctors is statistically significant in the population. Hence we cannot accept the hypothesis.

Table 6.20 ANOVA Analysis Based on Gender Variation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3282.485	1	3282.485	2.663	.106
Within Groups	123268.535	100	1232.685		
Total	126551.020	101			

Source: Compiled from survey data

Inference: Male and female doctors do not differ in their emotional intelligence. Hence, we cannot accept the hypothesis. The results of this study prove it false that women are more responsive to others needs and so have high EI.

6.5.2.3 Variance in the level of Emotional Intelligence Based on Age Variation

Table 6.21 Mean of EI of Doctors Based on Age

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
25-30	62	382.3226	31.13628	3.95431	374.4154	390.2297	312.00	446.00
31-40	19	390.1579	37.92722	8.70110	371.8776	408.4382	290.00	448.00
41-50	15	367.6667	47.35831	12.22786	341.4405	393.8928	290.00	450.00
>50	6	387.0000	33.52611	13.68698	351.8165	422.1835	363.00	454.00
Total	102	381.9020	35.39746	3.50487	374.9492	388.8547	290.00	454.00

Source: Compiled from survey data

The table - 6.21 reveals that in the sample, doctors whose age is between 25-30 years mean of EI scores of that group is 382.32. The upper limit and lower limit (at 95% confidence limit) of this mean are 390.22 and 374.41 respectively. Mean of EI of those who are under age group of 31-40 is 390.15. The upper limit and lower limit (at 95% confidence limit) of this mean are 408.43 and 371.87 respectively. Mean of EI of doctors who are under age of 41-50 years is 367.66. The upper limit and lower limit (at 95% confidence limit) of this mean are 393.89 and 341.44 respectively. Mean of EI of doctors who are above 50 years is 387. The upper limit and lower limit (at 95% confidence limit) of this mean are 422.18 and 351.81 respectively.

Table 6.22 ANOVA Analysis Based on Age Variation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4501.612	3	1500.537	1.205	.312
Within Groups	122049.408	98	1245.402		
Total	126551.020	101			

Source: Compiled from survey data

From the table No.6.22, (i.e. ANOVA Analysis based on age) it may be concluded that there is no significant difference among the mean of EI scores of medical doctors having a different age groups in the profession. This is because significant value calculated i.e. .312 is greater than ALFA=0.05. Thus we reject the null hypothesis.

Inference: There is no difference in emotional intelligence based on age variation. It is concluded that there is no significant difference in the mean of EI of young and aged medical doctors.

6.5.2.4 Variance in the Level of Emotional Intelligence of Doctors Based on Educational Standard Variation

As recorded in the table - 6.23, in the sample, it is observed that medical doctors who have bachelor degree have the high level of EI. The mean of EI of doctors who have a bachelor degree in medical science is 384.73. The upper limit and lower limit (at 95% confidence limit) of this mean are 394.87 and 374.60 respectively. The mean level of EI of doctors who have a master degree in medical science is 379.91. The upper limit and lower limit (at 95% confidence limit) of this mean are 389.58 and 370.25 respectively.

Table 6.23 Mean of EI of Doctors Based on Education Standard

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Graduate	42	384.7381	32.52471	5.01867	374.6027	394.8735	312.00	444.00
Post graduate	60	379.9167	37.41761	4.83059	370.2507	389.5827	290.00	454.00
Total	102	381.9020	35.39746	3.50487	374.9492	388.8547	290.00	454.00

Source: Compiled from survey data

From the table - 6.24, (i.e. ANOVA Analysis based on Education Standard variation) it may be concluded that there is no significant difference between the mean of EI scores of medical doctors having a different educational qualification. This is because significant value calculated i.e. .501 is greater than ALFA=0.05. Thus, it is concluded that there is no significant difference between mean of EI of medical doctors with the variation in the level of education standard acquired.

Table 6.24 ANOVA Analysis Based on Education Standard Variation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	574.317	1	574.317	.456	.501
Within Groups	125976.702	100	1259.767		
Total	126551.020	101			

Source: Compiled from survey data

Inference: There is no significant difference between the mean of EI based on educational Standard.

6.5.2.5 Variance in the level of Emotional Intelligence of Medical Doctors Based on Experience in Service Variation

Table 6.25 Mean of EI of Doctors Based on Experience in Service

	No.	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1-3	61	380.5738	30.78228	3.94127	372.6901	388.4575	304.00	446.00
4-7	14	382.8571	44.60227	11.92046	357.1046	408.6097	290.00	448.00
8-11	8	400.7500	30.48067	10.77655	375.2675	426.2325	344.00	444.00
>11	19	377.5263	43.46565	9.97171	356.5765	398.4761	290.00	454.00
Total	102	381.9020	35.39746	3.50487	374.9492	388.8547	290.00	454.00

Source: Compiled from survey data

From the table -6.25, we find that the mean of EI of doctors who have 1 to 3 years of service experience is 380.57. The upper limit and lower limit (at 95% confidence limit) of this mean are 388.45 and 372.69 respectively. The mean of EI of doctors who have 4 to 7 years of service experience is 382.85. The upper limit and lower limit (at 95% confidence limit) of this mean are 408.60 and 357.10 respectively. The mean of EI of doctors who have 8 to 11 years of service experience is 400.75. The upper limit and lower limit (at 95% confidence limit) of this mean are 426.23 and 375.26 respectively. The mean of EI of doctors who have above 11 years of service experience is 377.52. The upper limit and lower limit (at 95% confidence limit) of this mean are 398.47 and 356.57 respectively.

Table 6.26 ANOVA Analysis Based on Experience in Service Variation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3326.150	3	1108.717	.882	.453
Within Groups	123224.869	98	1257.397		
Total	126551.020	101			

Source: Compiled from survey data

From the table- 6.26, (i.e. ANOVA analysis based on experience in service variation) it may be inferred that there is no significant difference in the mean of EI of medical doctors having a different level of experience in the profession. This is because the significant value calculated (i.e. .453) is greater than ALFA=0.05. Thus, it is concluded that there is no significant difference in the level of EI of less experienced and more experienced medical doctors.

Inference: The EI of the medical doctors is not inflated by their experience. We accept alternative hypothesis and conclude that doctors with more number of years in service do not have high EI than doctors with lesser years of experiences.

We can conclude that our experiment does not provide evidence that the difference in EI on the basis of demographic variables is statistically significant in the population. Thus we reject the hypothesis that there is a significant difference in EI on

the basis of demographic variables (Gender, age education, and experience) of medical doctors of North Bengal.

6.5.3 Variance in Happiness on the Basis of Emotional Intelligence

In this section **sub- hypothesis three** i.e. there is a difference in happiness on the basis of EI is tested.

Table 6.27 Happiness Profiles of Doctors on the Basis of EI

Emotion/Happiness	Low	Medium	High
Very unhappy	3	3	2
Unhappy	Nil	10	Nil
Moderate	Nil	25	8
Happy	Nil	31	10
Very Happy	Nil	Nil	10

Source: Compiled from survey data

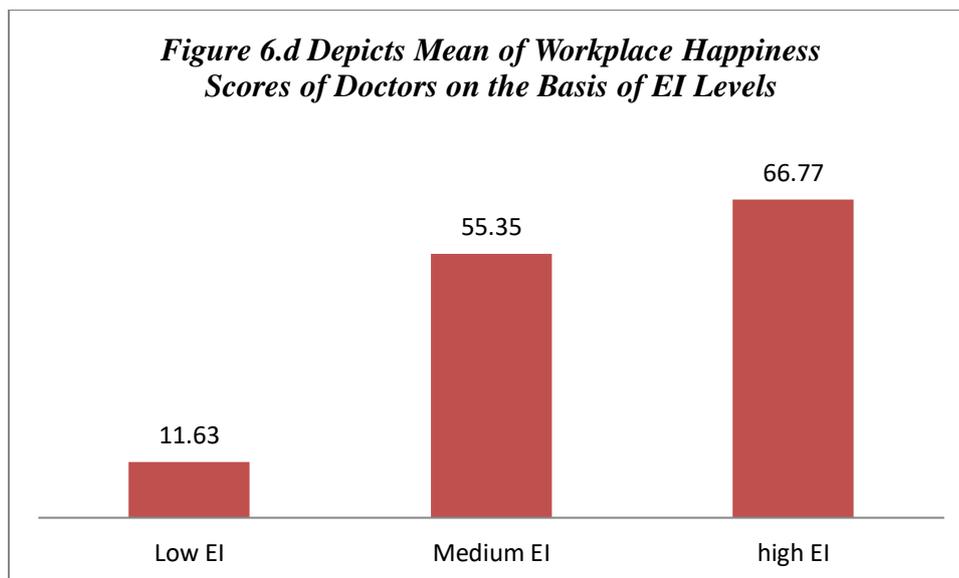
The table 6.27 reveals that all the very happy respondents of the survey have a high level of EI and all the doctors who have low level of EI are in the very unhappy group. Two doctors who have high EI level are in very unhappy group. 66.67% respondents with high EI is in the happy group. 44% respondents with medium EI is in the happy group and 25% doctors with medium EI are moderately happy.

From the table - 6.28, we find that the mean of workplace happiness of those who have a low EI is 11.63 with SD 2.49. The upper limit and lower limit (at 95% confidence limit) of this mean are 17.82 and 5.43 respectively. The mean of happiness of doctors who have a medium EI is 55.35 and SD is 19.25. The upper limit and lower limit (at 95% confidence limit) of this mean are 59.97 and 50.73 respectively. The mean of workplace happiness of doctors who have a high EI is 66.77 and SD is 19.27. The upper limit and lower limit (at 95% confidence limit) of this mean are 73.97 and 59.57 respectively.

Table 6.28 Mean of Happiness of Doctors Based on EI

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	3	11.6300	2.49345	1.43959	5.4359	17.8241	9.54	14.39
2.00	69	55.3549	19.25219	2.31769	50.7300	59.9798	1.56	79.05
3.00	30	66.7747	19.27530	3.51917	59.5772	73.9722	29.20	99.15
Total	102	57.4276	21.15495	2.09465	53.2724	61.5829	1.56	99.15

Source: Compiled from survey data, 1=Low Level of EI, 2=Medium Level of EI and 3=high level of EI



From the table- 6.29, (i.e. ANOVA analysis based on EI variation), we find that the probability calculated (.000) is less than ALFA= 0.05. Hence, we conclude that our experiment does provide evidence that there is a difference in the mean of workplace happiness on the basis of EI of doctors is statistically significant in the population.

Table 6.29 ANOVAs Analysis Based on EI of Doctors

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	9209.712	2	4604.856	12.667	.000
Within Groups	35991.004	99	363.545		
Total	45200.716	101			

Source: Compiled from survey data

Inference: We accept the null hypothesis and conclude that there is a significant difference in happiness among doctors on the basis of EI.

6.5.4 Relation between Happiness and Emotional Intelligence

To study the relationship between workplace happiness and EI six hypotheses are build. The workplace happiness of medical doctors is dependent variable and EI and its five components are considered as independent variables. To perform linear regression, in consideration of obtaining best analytical model; the average of the items of the construct is taken. The regression result gives an explanation of the variations in the dependent variable based on the variations in the independent variables. Hypotheses are accepted when calculated probability is less than Alfa=.05 at 95% confidence level.

Table 6.30 Correlation between Workplace Happiness, EI and Its components

Variables	Emotion	Self Awareness	Self regulation	Self motivation	Social Awareness	Social skill
Pearson Correlation Happy	.535**	.342**	.287**	.442**	.361**	.480**
Sig. (2-tailed)	.000	.000	.004	.000	.000	.000

Source: Compiled from survey data;**Correlation is the significant at level 0.01 level (2-tailed)

Pearson's Correlation has been used in order to assess the nature of the relationship between EI, components of EI and workplace happiness. The Pearson's Correlation values (table 6.30) are less than 0.5 indicate that there is a positive

association between EI, its components, and workplace happiness, and also statistically significant at 5% significance level. The strength of association (r) lies .535 to .287; it means that EI and its components have a medium to large impact of on workplace happiness. Positive and significant relation can be seen between the variables and it could be inferred that EI and its components determine workplace happiness levels of doctors

Sub-hypothesis four: There is a relation between happiness and EI and EI has an impact on happiness.

Table 6.31 Summary of Regression Analysis (Emotion)

Model Summary			Model Parameter		Unstandardised coefficient				Durbin Watson	VIF
R	R ²	Adjusted R ²	F	Sig.	B	Standard Error	t	Sig.		
.535	.286	.279	40.083	.000	15.984	2.525	6.331	0.000	1.988	1

Source: Compiled from survey data

The correlation coefficient between happiness and Emotional Intelligence is .535 (Table 6.31). Since the value is higher than $r=.5$ it suggests a strong positive correlation between happiness and emotional intelligence. It is inferred that as the emotional intelligence of the doctors increases the level of workplace happiness also increases.

The Summary of regression analysis (table No.6.31) shows the R² value is .286 which means that 28 % of the variance in happiness is caused by the emotional intelligence of the doctors.

The F statistics and t- value in the table show that p- values .000 are less than the assumed level of significance .05. We shall accept the null hypothesis and hence it can be said that the EI of the doctors has a significant impact on medical doctors' workplace happiness.

Inference Drawn: Analysis of data proves that EI of the doctors of medical college has a strong impact on workplace happiness. A high level of EI enables doctors to communicate better with their colleagues, principal, nurse, subordinates, and patients.

Sub-hypothesis five: There is a relation between happiness and self-awareness and self-awareness has an impact on happiness.

Table 6.32 Summary of Regression Analysis (Self -Awareness)

Model Summary			Model Parameter		Unstandardised coefficient				Durbin Watson	VI F
R	R ²	Adjusted R ²	F	Sig.	B	Standard Error	T	Sig.	1.9168	1
.342	.117	.108	13.283	.000	9.986	2.710	3.645	0.000		

Source: Compiled from survey data

The correlation coefficient between happiness and self-awareness dimension of emotional intelligence is .342 (Table 6.32). Since the value is positive and greater than $r=.3$ it suggests that a moderate positive correlation between happiness and self-awareness. It can be inferred that as self-awareness dimension of EI of the doctors increases the level of workplace happiness too increases.

The Summary of regression analysis (table No. 6.32) shows the R² value is .117 which means that 11.7 % of the variance in happiness is caused by the self-awareness dimension of emotional intelligence of the doctors.

The F statistics and t statistics in the table (6.32) also indicate that the level of significance is less than .05. It proves the null hypothesis that self-awareness has an impact on happiness.

The p-value (.000) of t statistics is less than the assumed level of significance 0.05; we shall accept the hypothesis five. At the Alpha = 0.05 level of significance, there exists adequate proof to infer that the self-awareness is a valuable predictor of workplace happiness.

Inference: We can conclude that our experiment provides evidence that self-awareness of the doctors of medical college has a strong impact on workplace happiness. Self-awareness (knowing oneself in terms of beliefs, attitudes, norms, and values) is an important quality and basic quality of doctors (Eskin 1980). A high level

of self-awareness may help one to efficiently manage oneself and then be competent to manage others in the difficult situation.

Sub-hypothesis six: There is a relationship between happiness and self-regulation and self-regulation has an impact on happiness.

Table 6.33 Summary of Regression Analysis (Self - Regulation)

Model Summary			Model Parameter		Unstandardised coefficient				Durbin Watson	VI F
R	R ²	Adjusted R ²	F	Sig.	B	Standard Error	t	Sig.	1.984	1
.287	.082	.073	8.946	.004	5.691	1.903	2.991	.004		

Source: Compiled from survey data

The correlation coefficient between happiness and Self-regulation dimension of emotional intelligence is .287 (Table 6.33). Since the r value .287 is close to $r=.3$ and p-value is less than .05 it suggests a moderate positive correlation between happiness and self-regulation. It can be inferred that as the self-regulation of the doctors increases the level of workplace happiness also increases. The Summary of regression analysis (table No. 6.33) shows the R² value to be .082 which predicts that 8.2 % of the variance in happiness is caused by the self-regulation dimension of emotional intelligence of the doctors.

The F statistics in the table (6.33) also indicates that the level of significance is less than .05. It proves the null hypothesis that self-regulation has a strong impact on workplace happiness.

The assumed level of significance 0.05 is greater than the computed sig.-value (0.004) of t statistics; we shall accept the sub-hypothesis six. At the Alpha = 0.05 level of significance, there exists adequate proof to infer that the self-regulation is a valuable predictor of workplace happiness.

Inference Drawn: The hypothesis is proved and we can conclude that self-regulation component of EI of the doctors of medical college has a strong impact on workplace happiness. A high level of self-regulation enables doctors to manage their strength

and weaknesses. The ability to perceive oneself as good is essential for relating well to others (Claudia S. P. Fernandez et.al.).

Sub-hypothesis seven: There is a relationship between happiness and self-motivation and self-motivation has an impact on workplace happiness.

Table 6.34 Summary of Regression Analysis (Self -Motivation)

Model Summary			Model Parameter		Unstandarised coefficient				Durbin Watson	VI F
R	R ²	Adjusted R ²	F	Sig.	B	Standard Error	T	Sig.	1.870	1
.442	.196	.188	24.329	.000	8.331	1.698	4.932	0.000		

Source: Compiled from survey data

The correlation coefficient between happiness and self-motivation dimension of EI is .442 (Table 6.34). Since the value of r (.442) is close to $r=.5$ and sig. value (p) is less than .05, it suggests a strong positive correlation between happiness and self-awareness. It can be inferred that as the emotional intelligence of the doctors increases the level of workplace happiness increases.

The Summary of regression analysis (table No. 6.34) shows the R² value is .196 which means that 19.6 % of the variance in happiness is caused by the self-motivation dimension of EI of the doctors.

The F statistics in the table (6.34) also indicates that the level of significance is less than .05. It proves the null hypothesis that self-motivation has a strong impact on workplace happiness.

The assumed level of significance 0.05 is greater than the computed sig.-value (0.000) of t statistics; we shall accept the sub-hypothesis seven. At the Alpha = 0.05 level of significance, there exists adequate proof to infer that the self-motivation is a valuable predictor of workplace happiness.

Inference Drawn: Analysis of data in the study shows that self-motivation dimension of EI of the doctors of medical college has a strong impact on workplace happiness. A high level of self-motivation enables doctors to be positive and look at

the brighter side of life. They are comfortable with oneself, patients, nurse and with their colleague and with life in general.

Sub-hypothesis eight: There is a relation between workplace happiness and social -awareness and social-awareness has an impact on happiness.

Table 6.35 Summary of Regression Analysis (Social -Awareness)

Model Summary			Model Parameter		Unstandardised coefficient				Durbin Watson	VIF
R	R ²	Adjusted R ²	F	Sig.	B	Standard Error	T	Sig.		
.361	.130	.122	15.006	.000	7.4885	2.035	3.874	0.000	1.983	1

Source: Compiled from survey data

The correlation coefficient between happiness and social -awareness dimension of EI is .361 (Table 6.35). Since the co-efficient value is positive and close to $r=.4$ and p-value is also significant, it suggests a moderate to strong positive correlation between happiness and self -awareness. It can be inferred that as EI of the doctors increases the level of workplace happiness increases.

The Summary of regression analysis (table No. 6.35 a) shows the R² value is .130 which means that 13 % of the variance in happiness is caused by the social awareness of EI of the doctors.

The F statistics in the table (6.35) also indicates that the level of significance is less than .05. It proves the hypothesis that social awareness has a significant impact on happiness.

The assumed level of significance 0.05 is greater than the computed sig.-value (0.000) of t statistics; we shall accept the sub- hypothesis eight. At the Alpha = 0.05 level of significance, there exists adequate proof to infer that the self-awareness is a valuable predictor of workplace happiness.

Inference Drawn: Thus the hypothesis is proved and we can infer that social awareness of the doctors of medical college has a significant impact on workplace

happiness. A high level of social -awareness among doctors enables to be empathic, aware of the organization matter and service oriented.

Sub-hypothesis nine: There is a relationship between happiness and social- skills and social- skills have an impact on workplace happiness.

Table 6.36 Summary of Regression Analysis (Social -skill)

Model Summary			Model Parameter		Unstandardised coefficient				Durbin Watson	Vif
R	R ²	Adjusted R ²	F	Sig.	B	Standard Error	T	Sig.	2.06	1
.480	.231	.223	30.002	.000	9.906	1.818	5.477	0.000		

Source; Compiled from Survey Data

The correlation coefficient between workplace happiness and social -skills dimension of EI is .480 (Table 6.36). Since the coefficient value is positive and close to r=.5 and p-value is also significant; it suggests a strong positive correlation between workplace happiness and social- skills. It can be inferred that as the social skill of the doctors increases the level of workplace happiness increases.

The summary of regression analysis (table No. 6.36) shows the R² value is.231 which indicates that 23 % of the variance in workplace happiness is caused by the social -skill dimension of EI of the doctors.

The F statistics in the table (6.36) also indicates that the level of significance is less than .05.It proves the hypothesis that social- skill has a significant impact on happiness.

The assumed level of significance 0.05 is greater than the computed sig.-value (0.000) of t statistics; we shall accept the sub-hypothesis nine. At the Alpha = 0.05 level of significance, there exists adequate proof to infer that the self-skills are a valuable predictor of workplace happiness.

Inference Drawn: Thus the hypothesis is proved and from this we can conclude that social- skill dimension of EI of the doctors of medical college has a strong impact on workplace happiness. Social-- skills of EI includes leadership quality, control, encouraging others, change catalyst, communication, conflict management, building bonds, teamwork & collaboration (Deepa Nair,2012.).

The result of Regression Coefficient (table-6.37) indicates that out of five components of EI only social skill of doctors is the good predictor of workplace happiness.

Table 6.37 Summary of Regression Coefficient

Components of EI	Beta	SIG.
Self Awareness	.173	.072
Self Regulation	.026	.788
Self Motivation	.198	.060
Social Awareness	.034	.757
Social skill	.321	.003

Source: Compiled from survey data

6.5.5 Discussion

The objectives of this section of the research are to identify the EI level of doctors who work at North Bengal medical college and to explore the relationship between demographic variables, EI and workplace happiness.

Data on emotional intelligence across gender indicates that male has a higher mean score of EI than female but this difference is statistically not significant. This finding is consistent with the result of Deepa Nair (2012), Kathungu Beatrix Mwathi (2010) Singh (2007) and Hopkins and Bilimoria (2008). The finding contradict the result of Mandell and Pherwani (2003) which showed significant differences in general EI scores between male and female managers. Stone, Parker, and Wood (2006) found the women scored higher on EI than men.

The result of ANOVA analysis of emotional intelligence based on age reveals that there is no significant difference in EI of doctors of different age groups. This finding supports the result of Deepa Nair (2012) who found no significant differences between EI and age range among private sectors banks employees in terms of EI in India and Kathungu Beatrice Mwathi (2010) also found no significant differences between EI and age range among service providers in Kenya. This finding contradicts the findings of Anitei (2008) study on a group of American people. The researcher reported a positive, significant, but weak relationship between age and EI.

The result of ANOVA analysis of emotional intelligence based on educational qualification reveals that there is no significant difference in EI of doctors having

different educational standard. This finding supports the result of Kathungu Beatrix Mwathi (2010) and contradicts the findings of Deepa Nair (2012). This finding support Goleman's ideas that higher educational qualifications may not have had a big impact on emotional intelligence (Kathungu Beatrix Mwathi, 2010).

The result of ANOVA analysis on emotional intelligence based on experience in service indicates that there is no significant difference in the mean of EI of doctors having different years of service experience. This finding supports the result of Kathungu Beatrix Mwathi (2010) and Deepa Nair (2012).

This finding also supports the result of Ngah, Jusof, and Rahman (2009), who established an insignificant correlation between EI and length of service among academics and middle management employees in Malaysian academia. Landa, Lopez-Zafra, Martos, and Aquilar-Luzon (2008) also found that among the nurses in general hospital in Spain EI not related to the length of service (Kathungu Beatrix Mwathi, 2010).

In the present study, the non-significant differences in EI on the basis of the demographic variables (Gender, age, educational qualification and experience in service) are observed; possibly it is the reflection of general EI score. If separate dimensions of EI are considered it may be possible that some significant differences may obtain. The small sample may also persuade the non-significance of the variance (Kathungu Beatrix Mwathi ,2010).

The research finding indicates that the medical doctors have a high level of EI. Findings reveal that all the dimensions of the EI (i.e., Self-awareness, Self-regulation, Motivation, Social-awareness, and Social-skill) and the overall EI are significantly correlated to workplace happiness .The regression results show that the overall EI and its dimensions have a significant impact on workplace happiness. It can be concluded that higher level of EI is related to higher levels of workplace happiness. The results of this study are consistent with the findings of Mallika Dasgupta, Furnham and Petrides (2003) which stated that EI bears a positive relation with happiness and a significant predictor of happiness. The results of the present study are also in coherence with the findings of Malik Roshan Ara (2013) that showed that the overall EI and its five dimensions are significantly related to happiness. The results of this study are consistent with the findings of Philip (2009) and Meetu Khosla and

Vandana Dokania (2010) who reported that happy respondents had higher EI compared to the unhappy respondents.

6.6 Findings related to the Relationship between Locus of control and Emotional Intelligence

This section deals with the analysis and interpretations related to the objectives and hypothesis of the relationship between Loc and Emotional intelligence

Table 6.38 EI Profiles of Doctors Based on Loc Type (Internal & External)

EI/Loc	Low	Medium	High
Internal Loc	1	54	28
External Loc	2	15	2

Source: Compiled from survey data

The table 6.38 reveals that out of 83 internal doctors 28 (34%) have a high EI level, 54 (65%) have a medium EI level and 1(1%) have a low level of EI. Approximately 11% of external doctors have a high and low level of EI.

Hypothesis Testing

Sub-hypothesis one: There is a difference in EI on the basis of Loc.

Table 6.39 Mean of EI of Doctors Based on Loc Type

LOC	N	Mean	Std. Deviation	Std. Error Mean
Internal	83	389.1205	29.48848	3.23678
External	19	350.3684	42.18242	9.67731

Source: Compiled from survey data

As recorded in the table No.6.39, in the sample, it is observed that medical doctors who have Internal Loc the mean of EI is 389.1205 and SD is 29.48848. The mean of EI of doctors who have external Loc is 350.3684 and SD is 42.18242. The Levene's test of equality of variances (6.40) shows that the level of significance (.003) is less than .05, the variances are not equal. The calculated p-value (.001) is less than .05 the assumed level of significance; hence the null hypothesis is accepted. It is concluded that there is a significant difference on EI on the basis of Loc or Loc effect the EI.

Table 6.40 Independent t test

	Levene's test of equality of variance		T test of equality of means						
	F	Sig	t	Df	Sig (2 tailed)	Mean differens	Std. error difference	95% confidence interval of the difference	
								Lower	Upper
Emotion Equal variance assumed	4.856	.030	4.470	100	.000	38.75206	8.17531	22.53248	54.97164
Equal variance not assumed			3.798	22.192	.001	38.75206	10.20427	17.60029	59.90383

Source: Compiled from survey data

Inference: We accept the null hypothesis i.e. there is a significant difference in EI on the basis of Loc type (i.e. internal and external).

Sub-hypothesis two: There is a relation between EI and its components with Internal Loc.

Pearson's Correlation has been used in order to assess the nature of the relationship between EI, its component, and internal Loc. Table- 6.41 shows that there is a significant ($p < .05$) positive correlation between internal locus of control, EI, and its components, except social awareness.

Table 6.41 Correlations between EI and Its Components with Internal Loc

Variables	EI	Self Awareness	Self Regulation	Self motivation	social Awareness	Social Skill
.Internal Loc	.440**	.139	.245*	.300**	.338**	.470**
Sig.(2 tailed)	.000	.165	.013	.002	.000	.000

Source: Compiled from survey data; **. Correlation is significant at the 0.01 level (2-tailed).;*. Correlation is significant at the 0.05 level (2-tailed).

Pearson's Correlation Coefficient r of the relation between EI and internal Loc is .444, self-awareness and internal Loc is .139(not significant), self-regulation and internal Loc is .254, self-motivation and internal Loc is .300, social awareness and internal Loc is .338, and social skill and internal Loc is .470. The sub- hypothesis two

is accepted i.e. there is a positive correlation between internal locus of control, EI and its components of the medical doctors of North Bengal.

Inference: Our experiment provides evidence that there is a significant positive relationship between Internal Loc, EI and different components of EI, except self - awareness dimension of EI of the doctors of the medical college.

Sub-hypothesis three: There is a relation between EI and its components with External Loc.

Table 6.42 Correlations between EI and Its Components with External Loc.

Variables	EI	Self Awareness	Self Regulation	Self motivation	social Awareness	Social Skill
External Loc	.118	-.068	-.174	.044	-.157	-.080
Sig.(2 tailed)	.236	.500	.081	.660	.114	..426

Source: Compiled from survey data

Pearson's Correlation result in table 6.42 shows that there is an insignificant ($p > 0.05$) negative correlation between external Loc, EI and its components; except self-motivation where the relationship is positive but insignificant. Since the obtained p is greater than the assumed 0.05 level of significance for all variables we reject the null hypothesis at 0.05 levels.

Inference: Thus the alternative hypothesis is accepted that there is an insignificant relation between EI, its components and external Loc.

6.6.1 Discussion

The objectives of this section of the research are to identify the levels of EI according to Loc type of doctors who work at North Bengal medical college and to explore the relationship between EI and Loc type. The survey finds that internal Loc type doctors have a high EI level than the doctors who have external type of Loc. Internal Loc is significantly and positively correlated with EI and its dimensions. This result supports the findings of Singh (2006) Gore & Sturgis (2005) and Sandra Glidea (2012). The results of Sandra Glidea (2012) also showed that a significant positive correlation with exaggerated internal Loc; which demonstrated that a person with an

excessive and unrealistic belief in their personal control was also high in EI. Individuals with internal Loc believe they can control their life events and have the well-built willpower to control and monitor their emotion. Pearson correlation result shows that external Loc is insignificantly and negatively related to EI and its dimension. This type of individuals believes in luck and faith than personal effort and control.

6.7 Relation between Workplace Happiness, Locus of control, and Emotional Intelligence

Table 6.43 EI and Loc Profile of Very Happy and Very Unhappy Doctors

Happiness/EI	Low	Medium	High
Very Happy	Nil	Nil	10(Internal Loc)
Very Unhappy	3(External Loc)	5(External Loc)	Nil

Source: Compiled from survey data

Table 6.43 shows that all the very doctors of the survey have internal Loc and high level of EI. There are no doctors with external loc in a very happy group with high EI level. They are in a very unhappy group with medium and low-level of EI.

Table 6.44 Summary of Regression analysis (EI and Internal Loc)

Model Summary			Model Parameter		Durbin Watson	VIF
R	R ²	Adjusted R ²	F	Sig.	1.977	1.239
.577	.333	.319	24.698	.000		

Source: Compiled from survey data; Dependent Variable happy

In the table 6.31, we see that 28.6% variation in happiness is explained by EI. When internal Loc is taken with EI, it explains 33.3% (the Summary of regression analysis table No.6.44) variance in workplace happiness; which is higher than previous one.

The F statistics (table-6.44) value shows that p- value .000 is less than the assumed level of significance .05 and it is statistically significant. The value of r (.577) indicates that EI and internal Loc jointly have strong relation to workplace happiness.

Table 6.45 Summary of Regression analysis (EI and External Loc)

Model Summary			Model Parameter		Durbin Watson	VIF
R	R ²	Adjusted R ²	F	Sig.	1.977	1.239
.535	.286	.272	19.844	.000		

Source: Compiled from survey data; Dependent Variable Happy

In the table 6.45, we see that 28.6% variation in happiness is explained by EI. When external Loc is taken with EI, there is no change (the Summary of regression analysis table No.6.45) in variation in workplace happiness. This is same as 28.6% variation in happiness as previous one (table-6.31).

The F statistics (table-6.45) value shows that p - value .000 is less than the assumed level of significance .05 and it is statistically significant.

The value of r (.535) indicates that the relation between EI, external Loc and workplace happiness. EI and external Loc jointly not influenced workplace happiness

We can conclude that there is a positive relationship between internal Loc, external Loc and EI, and Loc (internal and External) and EI explained significant variance in workplace happiness. Doctors with internal Loc are very happy and they have a high level of EI. Internal loc and EI are good predictors of workplace happiness.

6.7.1 Discussion

EI with internal Loc is a strong positive predictor of workplace happiness. Happy individuals can regulate their emotions better and control their impulses. The variance in workplace happiness has not changed when EI with external Loc is entered in the regression to test the effect of these variables on workplace happiness. EI with external Loc is not a strong positive predictor of workplace happiness.

6.8 Conclusion

The research hypothesis that there is a relation between Loc type (internal and external), EI and Workplace Happiness is tenable. There is a significant positive relationship between internal Loc and workplace happiness and no significant relation is found between external Loc and workplace happiness. The demographic /biographic variables (gender, age, education, and experience) are not significant in

determining EI and Loc type. It may be due to the sampling fluctuation that the differences in mean score of demographic variables with regard to EI and Loc type that was observed. EI with internal Loc is a strong positive predictor of workplace happiness. Happier individuals can regulate their emotions better and control their impulses. Furthermore, workplace happiness increases the level of Self-awareness, Self-regulation, Motivation, Social-awareness, and Social- skills (Mali Roshan Ara (2013).

Chapter - Seven

Analysis of Relationship between Occupational Stress, Emotional Intelligence, Locus of Control and Workplace Happiness

7.1 Introduction

Today's work life is challenging and complex which brings stress to our life. A certain level of stress is good, it motivates employees and increases work performance; but too much stress is harmful and causes ill health (logendran Mayuran, 2013). Frequent feeling of stress disturbs the quality of life and increases the dissatisfaction in life and then again unhappiness often added stress also. Quality of life negatively influenced by stress and impacts individuals' physical and mental health (Miller, G. E., & Blackwell, E., 2006).

Research studies show that happiness has multifaceted benefit in our life. It increases social relationship and knowledge (Fredrickson, 1998); performance, salaries, and health (Lyubomirsky et.al. 2005). It is our common belief that stress reduces happiness. If it is true, then to increase happiness it is utmost necessary to reduce the stress level of the individual. There is lack of studies which show that stress management strategies increase happiness. Happiness and stress are opposite dimensions which an individual can feel simultaneously (Schiffrin et.al. 2010). Intelligence especially emotional intelligence plays an important role in managing stress. Stress and strain are innate in the medical profession which may perhaps decrease the happiness of doctors. Goleman (2008) stated that emotional intelligence raised employee's abilities and this could assist to reduce environmental strains (Azman Ismail, 2010). Research shows that success and happiness in all spheres of our lives are determined better by emotional intelligence, than IQ and the ability to manage the felling of own and others. Emotionally intelligent people are able to control workplace stress and behave with co-workers properly. The qualities to control emotion help to increase satisfaction, performance, mental health, relation to workgroups and organizational success. Emotional intelligence helps to control stress and direct to enhance adaptation. It also helps to control hopelessness, moderates depression and suicidal ideation (Reshu Agarwal et.al, 2015).

In healthcare service doctors services are most valuable. So, analysis of doctors' occupational stress and its relation to workplace happiness and emotional intelligence is essential. To know what causes stress and reduce happiness in them is important to improve healthcare delivery system and to adopt proper strategies for stress management.

7.2 Primary Objective

5. To assess the relationship between Locus of Control, Emotional Intelligence, Workplace Happiness and Occupational Stress.

7.2.1 Sub- Objectives

1. To Study the Occupational Stress level of Medical Doctors
2. To identify the relationship between Occupational Stress and Demographic Variables.
3. To identify the relationship between Occupational Stress and Workplace Happiness.
4. To study the relationship between Stressors and Workplace Happiness
5. To study the relationship between Occupational Stress and Emotional Intelligence and its different components.
6. To study the moderator role of Emotional Intelligence on the relationship between Occupational Stress and Workplace Happiness.
7. To study the relationship between Occupational Stress and Locus of Control ((i.e. Internal or External) of medical doctors of North Bengal

7.3 Research Hypothesis

H₀₅: There is a negative relation between Occupational Stress, Locus of Control, Emotional Intelligence, and Workplace Happiness.

7.3.1 Sub Hypotheses

The following statistical hypotheses (sub) have been considered for analysis in this chapter:-

7.3.1 .1 Related to Occupational Stress and Workplace Happiness

- 1: Doctors' have a high level of Occupational Stress.
- 2: There is a significant difference in Occupational Stress level on the basis of Demographic Variables of medical doctors of North Bengal.

3: There is a significant difference in Workplace Happiness on the basis of Occupational Stress.

4: There is a negative relationship between Occupational Stress and Workplace Happiness, and occupational Stress has a significant impact on Workplace Happiness.

5. There is a negative relationship between Stressors and Workplace Happiness

7.3.1.2 Sub Hypotheses Related to Occupational Stress and Emotional Intelligence

1. There is a significant difference in Occupational Stress on the basis of levels of Emotional Intelligence

2. There is a negative relationship between Occupational Stress and Emotional Intelligence and Emotional Intelligence has a significant impact on Occupational Stress

3. There is a negative relationship between Occupational Stress and Self- Awareness and Self -Awareness has a significant impact on Occupational Stress.

4. There is a negative relationship between Occupational Stress and Self -Regulation and Self- Regulation has a significant impact on Occupational Stress.

5 There is a negative relationship between Occupational Stress and Self- Motivation and Self- Motivation has a significant impact on Occupational Stress.

6. There is a negative relationship between Occupational Stress and Social - Awareness and Social -Awareness has a significant impact on Occupational Stress.

7. There is a negative relationship between Occupational Stress and Social -Skills and Social Skills has a significant impact on Occupational Stress.

8. There is a negative relationship between factors of Emotional Intelligence and Occupational Stress.

9. Emotional Intelligence moderates the relation between Job Stress and Workplace Happiness.

7.3.1. 3 Sub Hypotheses Related to Occupational Stress and Locus of Control

1: There is a significant difference in Occupational Stress level on the basis of Locus of Control (internal and external)

2: There is a negative relationship between Occupational Stress and Locus of Control (internal & external).

3. Internal Locus of Control moderates the relation between Workplace Happiness and Occupational Stress.

7.4 Findings Related to the Analysis of Relationship between Occupational Stress and Workplace Happiness

This section deals with the analysis and interpretations related to the objectives and the hypotheses of the relationship between occupational stress and workplace happiness.

7.4.1 Level of Occupational Stress

Table 7.1 Level of OS and Interpretation

Class interval of the score	Upto 30	31-45	46- 65
Interpretation of the score	Low	Moderate	High

Source: Compiled from survey data

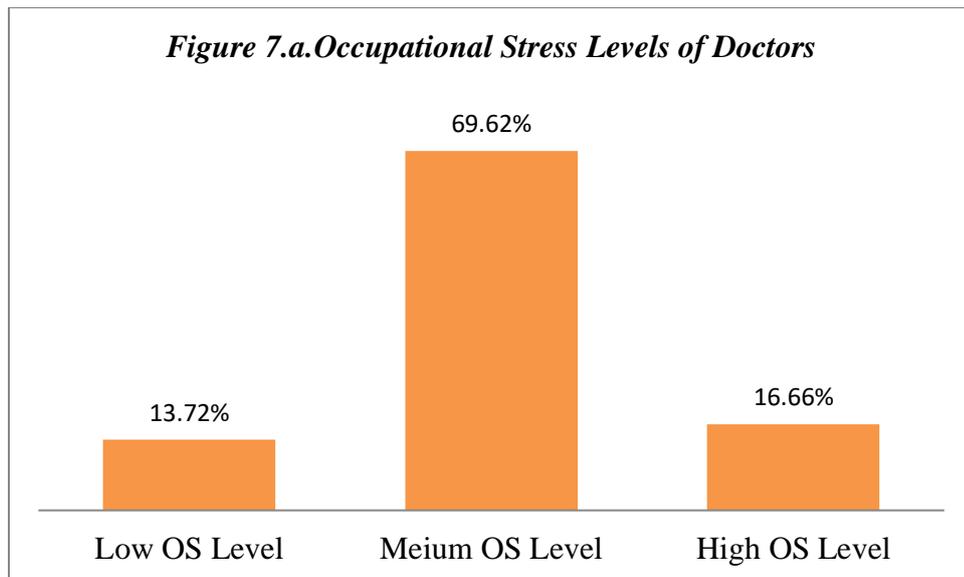
Srivastava's Occupational Stress scale measures stress which uses a 65 point scoring scale. The maximum one respondent can score is 65 and the minimum possible score is 13. Up to 30 scores are considered as low and above 45 are considered as high and 31 to 45 as a medium level of Stress.

Table - 7.2 Frequency and percentage of Level of OS of Doctors

OS Level	Low	Medium	High
Frequency/Percentage	13.72% (14)	69.62% (71)	16.66% (17)
Mean	24.4286	38.8028	48.8824
SD	4.36268	4.55324	4.67550

Source: Compiled from survey data

The table 7.2 reveals that out of 102 respondents 17 (16.66%) have a high level of occupational stress, 70% have a medium level and 14(13.72%) have a low level of occupational stress. A good number of respondents have the medium level of occupational stress. Doctors with high OS have a mean score of 48.88 with a standard deviation of 4.67. Fourteen doctors have low occupational stress with a mean value of 24.42 and standard deviation of 4.36.



Hypotheses Testing

Sub-hypothesis one: Medical doctors have a high level of Occupational Stress

Table 7.3 One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean	Skewness	Kurtosis
OS	102	38.6765	8.34072	.82585	-.283	.488

Source: Compiled from survey data

From the table- 7.3, it can be observed that mean of medical doctors' occupational stress scores is 38.7665. At 95% confidence interval, the upper limit of the occupational stress of this population is 2.3147 and the lower limit is -.9618 (table 7.4).

Table 7.4 One-Sample Test

	Test Value = 38					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
OS	.819	101	.415	.67647	-.9618	2.3147

Source: Compiled from survey data

To test the hypothesis that medical doctors have a high level of occupational stress, one sample t- test is used. The obtained t is not significant, $t(101) = .819$, $p = .415$ (table 7.4). Since the p -value is greater than .05, we can say that population mean is equal to the sample mean; hence the sub- hypothesis one is rejected.

Inference: In table 7.4 we see that obtained mean for occupational stress (38.67) is not higher than assumed mean and sig. value is greater than alpha value. It means that doctors of North Bengal medical college do not have a high level of occupational stress and the hypothesis one which postulates that doctors expressed a high level of occupational stress is rejected.

7.4.2 Demographic Variables and Occupational Stress

The table -7. 5 reveals that out of seventeen highly stressed doctors, 30% are female and 70% are male .Among the male doctors, 14% have high- stress level and 31% of female doctors have a high level of stress. The percentage (67%) of low occupational stress level is higher among male doctors.

The table-7.5 shows that among the youngest doctors 2% (out of 62) have a high-stress level and in the survey, there are no aged doctors who have a high occupational stress level. Doctors in the age range 41-50 (40%) are highly stressed. Most of the young doctors have a medium level of stress.

Table 7.5 Frequency and Percentage Analysis of occupational Stress of Doctors Based on Demographic Variables

Variables	Low	Medium	High
Gender:			
Female	2(14%)	9(13%)	5(30%)
Male	12(86%)	62(87%)	12(70%)
Age Range:			
25-30	5(36%)	47(66%)	10(59%)
31-40	4(29%)	14(20%)	1(6%)
41-50	4(29%)	5(7%)	6(35%)
>50	1(6%)	5(7%)	Nil
Education Standard:			
Bachelor(Graduate)	6(43%)	31(44%)	5(30%)
Master (Post Graduate)	8(57%)	40(56%)	12(70%)
Experience			
1-3	6(44%)	46(65%)	9(53%)
4-7	2(14%)	9(13%)	3(18%)
8-11	2(14%)	5(7%)	1(6%)
>11	4(28%)	11(15%)	4(24%)

Source: Compiled from survey data

Out of 17 highly stressed doctors, 30% (table-7.5) have a bachelor degree and 70% doctors have a master degree. Among the postgraduate doctors, 20% have a high-stress level and 12% of graduate doctors have a high level of occupational stress. The percentage (14%) of a low level of occupational stress is high among graduate doctors.

Among the highly stressed doctors, 53% have one to three years of experience in service and 6% have experience of eight to eleven years. Junior doctors are dominant in all three stress groups. It may be that in the survey a maximum number of respondents have experience in service one to three years.

Sub-hypothesis two; There is a significant difference in OS level on the basis of demographic variables of Medical Doctors of North Bengal.

7.4.2. 1 Variance in Occupational Stress of Doctors' Based on Gender

Table 7.6 Mean of Stress of Doctors Based on Gender

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Female	16	41.0000	10.16530	2.54133	35.5833	46.4167	23.00	62.00
Male	86	38.2442	7.95123	.85740	36.5394	39.9489	13.00	54.00
Total	102	38.6765	8.34072	.82585	37.0382	40.3147	13.00	62.00

Source: Compiled from survey data

The table 7.6 shows that in the sample mean of occupational stress scores of female and male doctors are 41 and 38.24 respectively. At 95% confidence interval, in the population, the upper limit of the mean of occupational stress scores of female doctors is 46 and of male doctors is 39. In the population, the lower limit of the mean of occupational stress scores of female medical doctors is 35.58 and the mean of occupational stress scores of male medical doctors is 36.

Table 7.7 ANOVA Analysis Based on Gender Variation

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	102.451	1	102.451	1.480	.227
Within Groups	6923.872	100	69.239		
Total	7026.324	101			

Source: Compiled from survey data

In the table 7.7, we find that the probability calculated ($p=.227$) is greater than $ALFA=0.05$. Hence, we conclude that our experiment does not provide evidence that the difference between the level of occupational stress of female and male medical doctors is statistically significant in the population.

7.4.2.2 Variance in Occupational Stress of Doctors' Based on Age

Table 7.8 Mean of OS of Doctors Based on Age

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
25-30	62	38.1774	6.94126	.88154	36.4147	39.9402	23.00	54.00
31-40	19	39.5263	7.19852	1.65145	36.0567	42.9959	22.00	50.00
41-50	15	41.8000	12.38201	3.19702	34.9431	48.6569	19.00	62.00
>50	6	33.3333	11.50072	4.69515	21.2641	45.4026	13.00	44.00
Total	102	38.6765	8.34072	.82585	37.0382	40.3147	13.00	62.00

Source: Compiled from survey data

In table 7.8, we find that in the sample doctors who are under age group of 25-30 years, mean of occupational stress scores of that group is 38.17, the upper and lower limit (at 95% confidence limit) of the mean is 39.94 and 36.41 respectively. The mean of occupational stress of those who are under age group of 31-40 is 39.52. The upper and lower limit (at 95% confidence limit) of this mean is 42.99 and 36 respectively. The mean of occupational stress of those who are under age of 41-50 years is 41.80. The upper and lower limit (at 95% confidence limit) of this mean is 48.65 and 34.94 respectively. The mean of occupational stress of those who are above 50 years is 33.33. The upper and lower limit (at 95% confidence limit) of this mean is 45.40 and 21.26 respectively.

From the table- 7.9, it can be concluded that there is no significant difference in the mean score of occupational stress of medical doctors having a different age group in the profession. This is because significant value calculated ($p=.173$) is greater than $ALFA=0.05$.

Table 7.9 ANOVA Analysis Based on Age Variation

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	346.805	3	115.602	1.696	.173
Within Groups	6679.519	98	68.158		
Total	7026.324	101			

Source: Compiled from survey data

7.4.2.3 Variance in Occupational Stress of Doctors' Based on Education Standard

Table 7.10 Mean of OS of Doctors Based on Education

	No.	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Graduate	42	37.8333	7.19728	1.11056	35.5905	40.0762	24.00	54.00
Post Graduate	60	39.2667	9.06823	1.17070	36.9241	41.6092	13.00	62.00
Total	102	38.6765	8.34072	.82585	37.0382	40.3147	13.00	62.00

Source: Compiled from survey data

As recorded in the table -7.10, in the sample, it is observed that medical doctors who have post graduation degree have a high level of occupational stress. The mean of occupational stress of those who have post graduation degree in medical science is 39.26. The upper and lower limit (at 95% confidence limit) of this mean is 41.60 and 36.92 respectively. The mean level of OS of those who have a bachelor degree in medical science is 37.83. The upper and lower limit (at 95% confidence limit) of this mean is 40 and 35.59 respectively.

Table 7.11 ANOVA Analysis Based on Education Variation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	50.757	1	50.757	.728	.396
Within Groups	6975.567	100	69.756		
Total	7026.324	101			

Source: Compiled from survey data

From the table 7.11, it can be concluded that there is no significant difference in the mean score of the occupational stress of medical doctors having a different educational qualification. This is because significant value calculated ($p=.396$) is greater than $ALFA=0.05$.

7.4.2.4 Variance in Occupational Stress of Doctors' based on Experience in Service

Table 7.12 Mean of Stress of Doctors Based on Experience

	No.	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1-3	61	38.8525	6.73012	.86170	37.1288	40.5761	23.00	54.00
4-7	14	39.2857	8.11863	2.16979	34.5982	43.9733	22.00	53.00
8-11	8	36.2500	8.43039	2.98059	29.2020	43.2980	24.00	48.00
>11	19	38.6842	12.69319	2.91202	32.5663	44.8021	13.00	62.00
Total	102	38.6765	8.34072	.82585	37.0382	40.3147	13.00	62.00

Source: Compiled from survey data

From the table -7.12, we find that, mean of occupational stress of those who have 1 to 3 years of service experience is 38.85. The upper and lower limit (at 95% confidence limit) of this mean is 40.57 and 37.12 respectively. The mean of occupational stress of those who have 4 to 7 years of service experience is 39.285. The upper and lower limit (at 95% confidence limit) of this mean is 43.97 and 34.59 respectively. The mean of the occupational stress of those who have 8 to 11 years of service experience is 36.25. The upper and lower limit (at 95% confidence limit) of this mean is 43.97 and 34.59 respectively. The mean score of occupational stress of those who have above 11 years of service experience is 38.68. The upper and lower limit (at 95% confidence limit) of this mean is 44.80 and 37.03 respectively.

Table 7.13 ANOVA Analysis Based on Experience Variation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	54.189	3	18.063	.254	.858
Within Groups	6972.135	98	71.144		
Total	7026.324	101			

Source: Compiled from survey data

From table -7.13, it can be concluded that there is no significant difference in the mean score of occupational stress of medical doctors having different years of

service in the profession. This is because significant value calculated ($p=.858$) is greater than $ALFA=0.05$.

Inference: We conclude that our experiment does not provide evidence that the difference in occupational stress on the basis of demographic variables is statistically significant in the population. Thus we reject the hypothesis that there is a significant difference in occupational stress on the basis of demographic variables (Gender, age education, and experience) of Medical Doctors of North Bengal.

7.4.3 Variance in Workplace Happiness on the Basis of Occupational Stress

Sub-hypothesis three: There is a significant difference in Workplace Happiness on the basis of Occupational Stress.

Table 7.14 Workplace Happiness Profiles of Doctors on the Basis of OS

OS/Workplace Happiness	Low	Medium	High
Very unhappy	Nil	Nil	8
Unhappy	Nil	9	1
Moderate	Nil	30	3
Happy	5	31	5
Very Happy	9	1	Nil

Source: Compiled from survey data

The table -7.14 reveals that all the doctors of the low occupational stress of the survey belong to the happy group and all the very unhappy doctors have a high occupational stress level .Five doctors who are happy, are also highly stressed.

Table 7.15 Mean of Workplace Happiness of Doctors Based on OS

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Low	14	79.4171	14.62475	3.90863	70.9731	87.8612	44.59	99.15
Medium	71	58.9723	13.70136	1.62605	55.7292	62.2153	28.92	80.02
High	17	32.8671	27.48315	6.66564	18.7365	46.9976	1.56	73.77
Total	102	57.4275	21.15484	2.09464	53.2723	61.5828	1.56	99.15

Source: Compiled from survey data

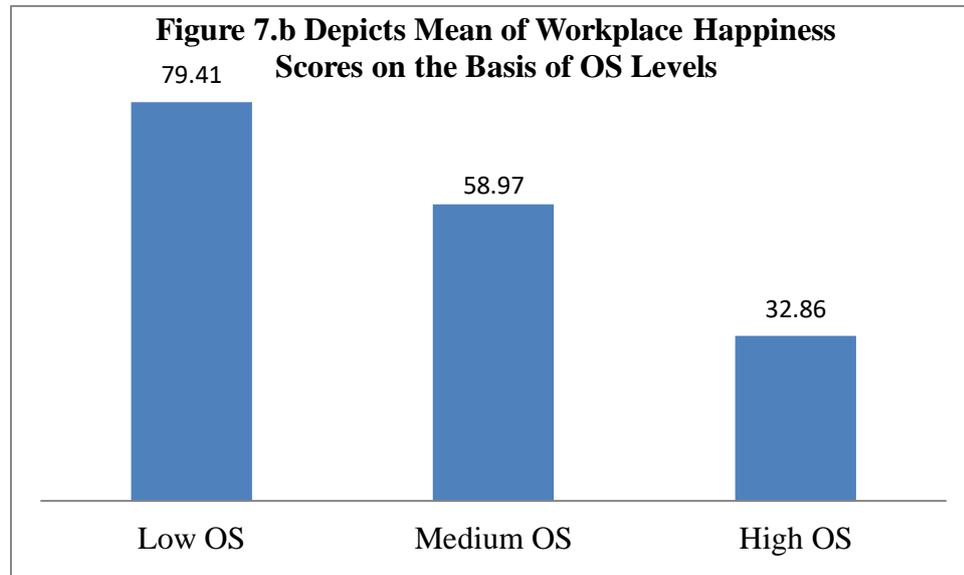


Table 7.15 indicates that, mean of happiness of those who have a low occupational stress level is 79.41 with SD 14.62. The upper and lower limit (at 95% confidence limit) of this mean is 87.86 and 70.97 respectively. The mean of workplace happiness of those who have a medium occupational stress is 58.97 and SD is 13.70. The upper and lower limit (at 95% confidence limit) of this mean is 62.21 and 55.72 respectively. The mean of workplace happiness of those who have a high occupational stress is 32.86 and SD is 27.48. The upper and lower limit (at 95% confidence limit) of this mean is 46.99 and 18.73 respectively.

Table 7.16 Anova Analysis Based on stress of Doctors

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	17193.706	2	8596.853	30.389	.000
Within Groups	28006.558	99	282.895		
Total	45200.264	101			

Source: Compiled from survey data

In the table- 7.16 we see that the probability calculated ($p = .000$) is less than $ALFA = 0.05$. Hence, we conclude that our experiment does provide evidence that the difference between the levels of happiness on the basis of occupational stress among doctors is statistically significant in the population.

Inference: Thus we accept the null hypothesis and conclude that there is a significant difference in happiness among doctors on the basis of occupational stress or we can say that happy medical doctors are less stressed.

Sub-hypothesis four: There is a negative relation between Occupational Stress and Workplace Happiness, and Occupational Stress has a significant impact on Workplace Happiness.

Table 7.17 Summary of Regression Analysis

Model summary		Annova		Regression coefficient		Dubin-watson	Vif
R ²	Adjusted R ²	F	Sig	R	Sig	2.01	1
.410	.404	69.418	.000	-.640	.000		

Source: Compiled from survey data, Dependent variable happy

To test the relationship between workplace happiness and occupational stress we used regression analysis. The summary of regression analysis (table -. 7.17) shows that the R² value is .410 which means that 41% of the variance in workplace happiness is caused by the occupational stress of the doctors. The F statistics in the table (7.17) also indicates that the significance level is less than .05. It proves the hypothesis that occupational stress has a strong impact on workplace happiness.

The regression coefficient between workplace happiness and occupational stress is -.640 (table 7.17). Since the value of r (-.640) is greater than r=.5 and sig. value (p) is less than .05, we shall accept the null hypothesis. At the Alpha = 0.05 level of significance, there exists adequate proof to infer that occupational stress has a negative impact on workplace happiness.

Inference Drawn: We can conclude that our experiment does provide evidence that occupational stress is negatively related to workplace happiness is statistically significant and it has an impact on the workplace happiness of the medical doctors.

7.4.4 Relation between Workplace Happiness and Occupational Stress

Sub-hypothesis five: There is a negative relation between Stressors and Workplace Happiness.

Table- 7.18 shows the factors of occupational stress and their mean and standard deviation. According to the responses of respondents' calculated mean is used to rank the factors of stress. The five most important factors of stress are workload, peer-relation, time, work-overload and work- life balance. The table also

reveals that 37% of respondents have a high occupational stress on workload, peer-relation is the factor of high occupational stress stressor of 30% doctors ; 25% doctors reported that time management causes them high occupational stress . Only 25% respondent informed that they were stressed in explaining responsibilities to a new employee.

Table -7.18 Descriptive Statistics of Stressors

Stressor	MEAN	SD	RANK	Response as high
I am delegated some extra responsibilities in addition to my prescribed ones	4.0196	.96452	1	37%
I get irritated in explaining to new personnel about their work and responsibilities	2.1765	1.08465	12	2%
I feel that I am not fully capable and competent to bear out my job responsibilities effectively.	1.9706	1.12096	13	4%
I have to give extra time due to excessive work load	3.5980	1.11923	3	25%
I am to do some such tasks as ought to be done by others	3.3431	1.03880	4	12%
It becomes very difficult for me satisfy everyone in distribution of work and responsibilities	3.7059	1.11327	2	30%
It becomes difficult and dubious for me to take decision in crucial matters pertaining to subordinates' service	3.0490	1.06592	6	8%
A big burden of supervision and control of a number of employees is on me	2.5196	1.6662	10	7%
I have to be ultimately responsible for the performance of a number of employees.	2.8687	1.34267	8	15%
I have given major responsibility of formulation and/or implementation of important policies.	2.8431	1.34050	9	14%
Having excessive job responsibilities, I find it difficult to give sufficient time to my family and friend circle.	3.1078	1.42750	5	24%
I have to take crucial decisions in the matter of employees' grievances, transfers and/or promotions.	2.4706	1.39806	11	10%
I am given responsibilities of solving crucial/emergent problems of the department/ organization	3.0098	1.27811	7	14%

Sources: Compiled from survey data

Table- 7.19 Correlation coefficients between doctors' workplace happiness and stressors

Stressor	Pearson correlation	Sig.
I am delegated some extra responsibilities in addition to my prescribed ones	-.322**	.001
I get irritated in explaining to new personnel about their work and responsibilities	-.174	.080
I feel that I am not fully capable and competent to bear out my job responsibilities effectively.	-.294**	.003
I have to give extra time due to excessive work load	-.356**	.000
I am to do some such tasks as ought to be done by others	-.441**	.000
It becomes very difficult for me satisfy everyone in distribution of work and responsibilities	-.386**	.000
It becomes difficult and dubious for me to take decision in crucial matters pertaining to subordinates' service	-.411**	.000
A big burden of supervision and control of a number of employees is on me	-.340**	.000
I have to be ultimately responsible for the performance of a number of employees.	-.347**	.000
I have given major responsibility of formulation and/or implementation of important policies.	-.374**	.000
Having excessive job responsibilities, I find it difficult to give sufficient time to my family and friend circle.	-.375**	.000
I have to take crucial decisions in the matter of employees' grievances, transfers and/or promotions.	-.354**	.000
I am given responsibilities of solving crucial/emergent problems of the department/ organization	-.329**	.001

Sources: Compiled from Survey data; Dependant Variable Workplace Happiness; **Correlation is significant at 0.01 level (2 tailed)

The results of the Pearson correlation test presented in table 7.19 depicts that out of thirteen factors of occupational stress twelve factors are negatively and significantly related to workplace happiness. The strengths of the correlation are between $r = -.329$ to $r = -.411$. Since the alpha values are less than .01 we can accept the null hypothesis and reject alternative hypothesis.

Interference: We conclude that our experiment provides evidence that all the factors of stress/stressors, except one, are negatively related to workplace happiness. The strength of association indicates that all these twelve factors have medium to high impact to reduce job happiness among medical doctors.

7.4.5 Discussion

The objectives of this section of the research are to explore the relationship between occupational stress and workplace happiness of medical doctors. The one sample t- test's result reveals that doctors of North Bengal medical college do not have a high level of occupational stress. They have a medium level of occupational stress. This finding does not support Jens Klein et.al. (2011) result, who noted that clinicians had high levels of job stress and this, could be account for physicians' and patients' health. Health care professionals compare to other professional possessed higher levels of pressure within their workplace (Rees, D. W. and Cooper, 1992). Hassan Danial Aslam et.al. also reported a high level of stress among private and public hospitals doctors in Pakistan. Hussain and Singh (2002) noted that gynecologists and surgeons had significantly higher perceived stress than the Ophthalmologists. The findings of Ramirez et al (1996) support this view. Saini NK et.al (2010) and Aarti G Sahasrabuddhe et.al (2015) in their study on resident doctors observed high- stress level among them.

Data on occupational stress across gender indicates that female have higher mean score than male but this difference statically is not significant. This finding is consistent with the result of Zeynep Kalyoncu et.al (2012) and the study of HIRAK Dasgupta and Suresh Kumar (2009) .They also found that there was no difference between the stress levels of male and female doctors. The finding contradicts the result of Abbas Sadeghi1 et.al.(2016) and Irfana Baba (2012). Their descriptive statistics result showed that compare to female teacher male teacher had higher job stress. Rashmi Gupta and Dr. Vilas Chopde (2011) observed significant positive relationships between respondents gender and work stress.

The result of ANOVA analysis of occupational stress based on age reveals that there is no significant difference among the mean of occupational stress on the basis of age groups. This finding do not support the result of Dragana MILUTINOVIĆ et.al (2012) and Zeynep Kalyoncu, et.al. (2012) who found significant differences between occupational stress and age range. They reported that compare to older people younger people had a high-stress level.

The results of ANOVA analysis of occupational stress based on educational qualification and experience in service reveal that there is no significant difference

between the mean of occupational stress of having different educational levels and experience in service. The present study does not support the result of Zeynep Kalyoncu, et.al. (2012) that education significantly affects the perception of stress.

A British Medical Association (BMA) report (2000) suggested that many senior doctors suffered high level of stress as a result of their work which directly hampered their ability to provide high-quality care to patients. Spurgeon et. al (2005) in a study on stress among Government hospitals found that older medical practitioners were more stressed by the new contract demands in comparison to younger doctors, and among younger doctors impractical demands of patients raised their stress level.

In the present study, the non-significant differences in the demographic variables (Gender, age, educational qualification and experience in service) observed, it is possibly due to the score of occupational stress . If the item of occupational stress differ it is possible that some significant result may get. The small sample size may also be the reason for the non-significance of the variance.

The result of ANOVA analysis shows that there is a significant difference in the mean of workplace happiness of doctors' according to their levels of occupational stress. Results of regression and correlation reveal that occupational stress and its factors are negatively related to workplace happiness and occupational stress have a significant impact on workplace happiness. It can be concluded that higher level of occupational stress is related to lower level of workplace happiness. The finding that there is the inverse relationship between workplace happiness and occupational stress supports the result of Abdullah Omidi Hossein Akbari, Mehrdad Mahdian (2010), Schiffrin & Nelson (2010) and Blanchflower DG, Oswald AJ (2008). Findings of the present research show that those who fell very unhappy are highly stressed and the occupational level is low among the very happy individual. Hussain (2001) noticed that the stress effects associated with stressful situations did not influence the psychological well being among surgeons.

The present study has identified that workload, peer-relation, time, work-overload and work-life balance are the five most important sources of the stress of medical doctors. This result is in line with most of the previous researches findings (such as Burbeck et. al 2002 and Schattner et. al 1998). Research studies stated that

there were many causes correlated with the occupational stress of doctors/general practitioners.

7.5 Findings Related to the Relationship between Occupational Stress and Emotional Intelligence

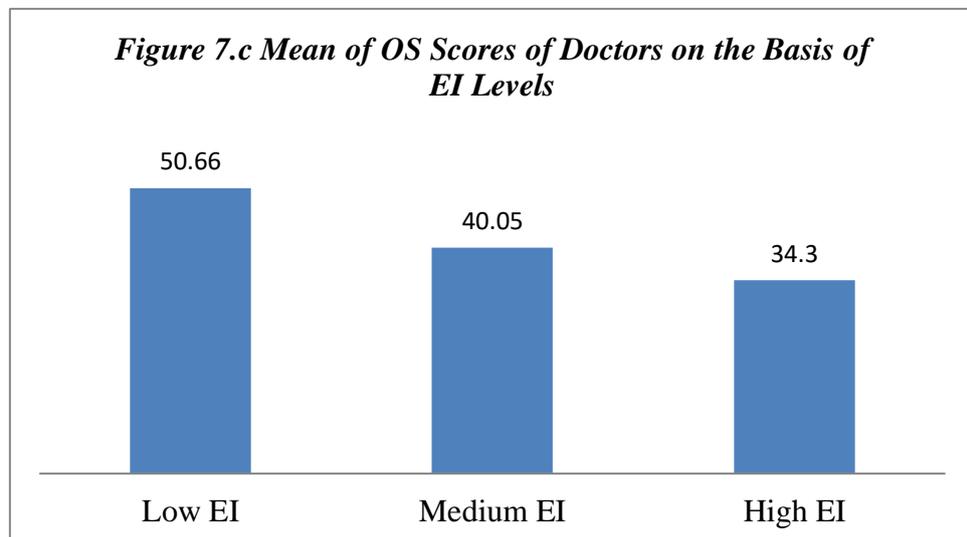
7.5.1 Variance in Occupational Stress on the Basis of Emotional Intelligence

In this section sub- hypothesis one that there is a significant difference in Occupational Stress on the basis of Emotional Intelligence levels is tested.

Table 7.20 Mean of Occupational Stress of Doctors Based on EI Levels

	No.	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Low	3	50.6667	.57735	.33333	49.2324	52.1009	50.00	51.00
Medium	69	40.0580	6.98503	.84090	38.3800	41.7360	27.00	62.00
High	30	34.3000	9.41441	1.71883	30.7846	37.8154	13.00	47.00
Total	102	38.6765	8.34072	.82585	37.0382	40.3147	13.00	62.00

Sources: Compiled from survey data



From the table -7.20 we find that the mean of occupational stress of those who have a low emotional intelligence is 50.66 with SD .57735. The upper and lower limit (at 95% confidence limit) of this mean is 52.10 and 49.23 respectively. The mean of the occupational stress of those who have a medium emotional intelligence level is 40.05 and SD is 6.98. The upper and lower limit (at 95% confidence limit) of

this mean is 41.73 and 38.38 respectively. The mean of the occupational stress of those who have a high emotional intelligence is 34.33 and SD is 9.41. The upper and lower limit (at 95% confidence limit) of this mean is 37.81 and 30.78.

Table 7.21 ANOVAs Analysis Based on EI of Doctors

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1137.589	2	568.794	9.562	.000
Within Groups	5888.735	99	59.482		
Total	7026.324	101			

Sources: Compiled from survey data

The result of ANOVA (table 7.21) shows that the probability calculated ($p=.000$) is less than $\alpha=0.05$. Hence, we conclude that our experiment provides evidence that the difference among the mean of occupational stress on the basis of emotional intelligence levels among doctors is statistically significant in the population.

Inference: We can accept the null hypothesis that there is a significant difference in the occupational stress among doctors on the basis of emotional intelligence levels and conclude that doctors who have a high level of emotional intelligence are less prone to occupational stress.

7.5.2 Relation between Occupational Stress and Emotional Intelligence

To study the relationship between occupational stress and emotional intelligence six hypotheses are built. The occupational stress of medical doctors is dependent variable and emotional intelligence and its five components are considered as independent variables. To perform linear regression, in consideration of obtaining best analytical model; the average of the items of the construct is taken. The regression result gives an explanation of the variations in the dependent variable based on the variations in the independent variables. Hypotheses are accepted when calculated probability is less than $\alpha=.05$ at 95% confidence level.

Sub-Hypothesis two: There is a negative relation between Occupational Stress and Emotional Intelligence and Emotional Intelligence has a significant impact on occupational stress.

Table 7. 22 Summary of Regression Analysis (Emotion)

Model summary		Annova		Regression coefficient		Durbin-Watson	Vif
R ²	Adjusted R ²	F	Sig	R	Sig	1.946	1
.270	.263	36.965	.000	-.520	.000		

Source : Compiled from Survey Data

The Summary of regression analysis (table7.22) shows that the R² value is .263 which means that 26 % of the variance in workplace happiness is caused by the occupational stress of the doctors.

The F statistics and t statistics in the table (table7.22) show that p -values (p=.000) are less than the assumed level of significance .05. We shall accept the sub-hypothesis and hence it can be said that the emotional intelligence of the medical doctors has a significant influence on occupational stress.

The regression coefficient between occupational stress and emotional intelligence is -.520 (Table 7.22). Since the value is higher than r=.5 it suggests a strong negative correlation between occupational stress and emotional intelligence. It is inferred that as the emotional intelligence of the doctors increases the level of stress decreases.

Inference Drawn: The sub- hypothesis is proved. It means that emotional intelligence of the doctors of medical college has a strong impact on occupational stress. A high level of emotional intelligence enables doctors to communicate better with their colleagues, principal, nurse, subordinates, and patients.

Sub-hypothesis three: There is a negative relationship between Occupational Stress and Self -Awareness and Self -Awareness has a significant impact on Occupational Stress.

The Summary of regression analysis (table7.23) shows that the R² value is .417 which means that 41 % of the variance in stress is caused by the self- awareness component of emotional intelligence of the doctors. The F statistics and t statistics in the table (table7.23) show that p -values (p=.000) are less than the assumed level of

significance .05. We shall accept the sub- hypothesis and hence it can be said that the self-awareness of the doctors has a significant influence on medical doctors' occupational stress.

Table 7.23 Summary of Regression Analysis of (Self Awareness)

Model summary		ANOVAs		Regression coefficient		Durbin-Watson	Vif
R ²	Adjusted R ²	F	Sig	R	Sig	1.706	1
.417	.163	20.732	.000	-.414	.000		

Source: Compiled from Survey Data

The regression coefficient between occupational stress and self-awareness is -.414 (Table 7.23). Since the value is higher than $r=.3$ it suggests a strong negative correlation between occupational stress and self-awareness component of emotional intelligence. It is inferred that as self-awareness among doctors increases the level of occupational stress decreases.

Inference : Analysis of data s proves that self-awareness of the doctors of medical college has a strong impact on occupational stress. Self-awareness (knowing oneself in terms of beliefs, attitudes, norms, and values) is an important and basic quality of doctors (Eskin 1980). A high level of self-awareness may help one to manage efficiently oneself and then be competent to manage others in the difficult situation.

Sub-hypothesis four: There is a negative relationship between Occupational Stress and Self-Regulation and Regulation has a significant impact on Occupational Stress.

The Summary of regression analysis (table7.24) shows that the R² value is .097 which means that 9 % of the variance in occupational stress is caused by the self-regulation of the doctors.

The F statistics and t statistics in the -table 7.24 show that p- values ($p=.000$) are less than the assumed level of significance .05. We shall accept the null hypothesis and hence it can be said that the self-regulation of the doctors has a significant influence on medical doctors' occupational stress.

Table 7.24 Summary of Regression Analysis of (Self -Regulation)

Model summary		ANOVAs		Regression coefficient		Durbin-Watson	Vif
R ²	Adjusted R ²	F	Sig	R	Sig	1.851	1
.097	.088	10.725	.001	-.311	.000		

Source: Compiled from Survey Data

The regression coefficient between occupational stress and self-regulation is -.311 (Table7.24). Since the value is equal to $r=.3$ it suggests a moderate negative correlation between occupational stress and self regulation component of emotional intelligence. It is inferred that as self -regulation among doctors increases the level of occupational stress decreases.

Inference Drawn: The sub- hypothesis is accepted and we can infer that self-regulation dimension of emotional intelligence of the doctors of medical college has a strong impact on occupational stress. A high level of self -regulation enables doctors to manage their strengths and weaknesses. The ability to perceive oneself as good is essential for relating well to others (Claudia S. P. Fernandez et.al.).

Sub-hypothesis five: There is a negative relationship between Occupational Stress and Self- Motivation and Self -Motivation has a significant impact on Occupational Stress.

Table 7.25 Summary of Regression Analysis (Self Motivation)

Model summary		ANOVAs		Regression coefficient		Durbin-Watson	Vif
R ²	Adjusted R ²	F	Sig	R	Sig	1.876	1
.167	.159	20.088	.001	-.409	.000		

Source: Compiled from survey data

The Summary of regression analysis (table7.25) shows that the R² value is .167 which means that 16 % of the variance in occupational stress is caused by the self- motivation of the doctors.

The F statistics and t statistics in the table (table 7.25) show that p- values (p=.000) are less than the assumed level of significance .05. We shall accept the sub-hypothesis and hence it can be said that the self -motivation of the doctors has a significant influence on medical doctors’ occupational stress.

The regression coefficient between occupational stress and self- motivation is -.409 (Table 7.25). Since the value is greater than $r=.3$ it suggests a strong negative correlation between occupational stress and self- motivation of emotional intelligence. It is inferred that as self –motivation among doctors increases the level of occupational stress decreases.

Inference Drawn: We can conclude that our experiment provides evidence that self-motivation dimension of emotional intelligence of the doctors of medical college has a strong impact on occupational stress. A high level of self- motivation enables doctors to be positive and look at the brighter side of life. They are comfortable with oneself, patients, nurse and with their colleague and with life in general.

Sub-hypothesis six: There is a negative relationship between Occupational Stress and Social Awareness and Social -Awareness has a significant impact on Occupational Stress.

Table 7.26 Summary of Regression Analysis of (Social- Awareness)

Model summary		ANOVAs		Regression coefficient		Durbin-Watson	Vif
R ²	Adjusted R ²	F	Sig	R	Sig	1.788	1
134	.126	15.537	.000	-.367	.000		

Source: Compiled from survey data

The Summary of regression analysis (table7.26) shows that the R² value is .134 which means that 13 % of the variance in occupational stress is caused by the social- awareness of the doctors.

The F statistics and t statistics in the table (table 7.26) show that p- values (p=.000) are less than the assumed level of significance .05. We shall accept the sub-hypothesis and hence it can be said that the social- awareness among the doctors has a significant influence on medical doctors’ occupational stress.

The regression coefficient between occupational stress and social- awareness is $-.367$ (table 7.26). Since the value is greater than $r=.3$ it suggests a strong negative correlation between the occupational stress and social -awareness of emotional intelligence. It is inferred that as social -awareness of doctors increases the level of stress decreases.

Inference: Analysis of data proves that social- awareness of the doctors of medical college has a strong impact on occupational stress. A high level of social -awareness among doctors enable to be empathic, aware of the organization matter and service oriented which in turn helps to reduce occupational stress.

Sub-hypothesis seven: There is a negative relationship between Occupational Stress and Social -Skills and Social-Skills has a significant impact on Occupational Stress.

Table 7.27 Summary of Regression Analysis (Social -Skills)

Model summary		ANOVAs		Regression coefficient		Durbin-Watson	Vif
R ²	Adjusted R ²	F	Sig	R	Sig	1.996	1
.145	.137	16.975	.000	-.381	.000		

Source: Compiled from survey data

The Summary of regression analysis (table7.27) shows that the R² value is .145 which means that 14.5 % of the variance in occupational stress is caused by the social- skill of the doctors.

The F statistics and t statistics in the table 7.27 show that p- values ($p=.000$) are less than the assumed level of significance .05. We shall accept the null hypothesis and hence it can be said that the social- skills of the doctors has a significant influence on medical doctors' occupational stress.

The regression coefficient between occupational stress and social skill is $-.381$ (Table 7.27). Since the value is greater than $r=.3$ it suggests a strong negative correlation between the occupational stress and social - skill dimension of emotional intelligence. It is inferred that as the social -skill of doctors increases the level of occupational stress decreases.

Inference: Analysis of data in the study proves that social -skill dimension of emotional intelligence of the doctors of medical college has a strong impact on the occupational stress. Social- Skills dimension of emotional intelligence includes leadership quality, control, encouraging others, change catalyst, communication, conflict management, building bonds, teamwork and collaboration (Deepa Nair,2012).All these qualities enable doctors to reduce their occupational stress.

Sub-hypothesis eight: There is a negative relationship between factors of Emotional Intelligence and Occupational Stress.

7.28 Coefficient of Multiple Regressions

Variable	B	Beta	T	Sig	Tolerance	Vif
SA	-2.966	-.261	-2.689	.008	.783	1.277
SM	-.487	-.062	-.624	.534	.740	1.351
SR	-1.197	-.160	-1.513	.134	.655	1.527
SCA	-.771	-.090	-.813	.418	.606	1.649
SK	-1.446	-.177	-1.622	.108	.619	1.614

Source: Compiled from survey data; Dependent Variable: Stress

Table 7.28 shows the coefficient of multiple regressions where occupational stress is the dependent variable and components of emotional intelligence are predictors. The obtained t is significant, $t(101) = -2.689, p = .008$ (table 6.16) for self-awareness. Among the five components of emotional intelligence only for self-awareness the p -value is less than .05 and it is the significant predictor of occupational stress. Sub-hypothesis nine can be accepted and we can conclude that factors of emotional intelligence are negatively related to occupational stress but the relationship is statistically significant for self – awareness factor of emotional intelligence.

7.5.3 Moderator Role of Emotional Intelligence on the Relationship between Occupational Stress and Workplace Happiness

Sub-hypothesis nine: Emotional intelligence moderates the relationship between occupational stress and workplace happiness.

To test the moderating effects of emotional intelligence on the relationship between occupational stress and workplace happiness hierarchical regression (recommended by Baron and Kenny, 1986) is done. To reduce the problem of multicollinearity the dependent variable and independent variable are centralized (Fazier, Tix and Baron, 2004). Tolerance values of less than .10 and VIF (Variance

Inflation Factor) values of greater than 10 show a multicollinearity problem (Cohen, Cohen, West, & Aiken, 2003) in regression analysis. In this study, the tolerance values are between .172 and 1, and the VIF values are between 1 and 5.80. These results indicate that there is no problem with multicollinearity (Asım Çivitci, 2015).

Table 7.29 The Results of Hierarchical Regression Analysis for the Moderating Effects of EI on the Relationship between Occupational stress and workplace happiness

Variable	B	Beta	T	R ²	R ² Change
Step-1 Occupational stress	-21.106	-.640	-8.332*	.410**	.410**
Step-2 Occupational stress EI	-16.358 8.283	-.496 .277	-5.771** 3.224**	.466**	.056**
Step-3 Occupational stress EI Occupational stress*EI	-30.735 7.477 7.035	-.532 .250 .471	-5.467** 3.001** 2.926**	.509**	.043**

Source: Compiled from survey data; Dependant variable: Workplace Happiness

In step one of the hierarchical regressions first entered the predictor variable occupational stress, for the second step of the regression equation; the moderator variable emotional intelligence is entered. The interaction of predictor and moderator variable is entered in the third step into the regression equation. In table- 7.29, in step one, the independent variable occupational stress explains 41% variance in dependent variable i.e. workplace happiness. In step 2 when emotional intelligence is added to the equation the R Square is significant and explains 46.6% variance. In step-3 when interaction effect of emotional intelligence on occupational stress is added R square is then also significant and explains 50.9% variance and R square change has increased by .043(table-7.29) in step-three. Thus it confirms that emotional intelligence acts as a moderator between the relationship occupational stress and workplace happiness.

The table 7.29 reveals that in step one occupational stress ($\beta = -.640, p < .001$) has a significant negative relation with workplace happiness and in step two EI ($\beta = .277, p < .001$) has a significant positive relation with workplace happiness. Step three shows that interaction of occupational stress and emotional intelligence significantly predict workplace happiness. A significant result of the R^2 change (table 7.29) in step three indicates that there is moderation effect of emotional intelligence on the relationship between occupational stress and workplace happiness (Asım Çivitci, 2015). Our experiments fulfill all the three condition of moderation regression .The interaction chart (annexure-E-1) shows that an interaction effect is strong among the doctors who have a moderate level of emotional intelligence. They are better able to manage their occupational stress and increase workplace happiness. Thus we accept the sub- hypothesis that EI acts as a moderator between occupational stress and workplace happiness.

Inference: Our experiment provides evidence that emotional intelligence acts as a mediator to reduce occupational stress and increasing workplace happiness of doctors.

7.5.4 Discussion

The objectives of this section of the research are to explore the relationship between occupational stress and emotional intelligence of doctors of North Bengal medical college. The result of ANOVA analysis shows that there is a significant difference in the mean of occupational stress of doctors' according to their levels of emotional intelligence. This result of the study is in line with Jude's observation. He found that emotional intelligence had a significant impact on perceived occupational stress and among the school teachers there was a significant difference in the mean of occupational stress on the basis of emotional intelligence levels (high, medium and Low) .Results of correlation and regression reveal that emotional intelligence and its five dimensions (i.e., Self-awareness, Self-regulation, Motivation, Social-awareness and Social-skill) are negatively related to occupational stress and have a significant impact on occupational stress. It can be concluded that higher level of emotional intelligence is related to lower level of occupational stress. The finding that there is a significant negative relationship between emotional intelligence and occupational stress supports the result of Sunil (2009) , NINA OGIŃSKA-BULIK (2005), Zeynep

Kalyoncu (2012) and Maryam Khaniyan et.al (2013) but contradicts the finding of Brand's(2007) and DR. R. Krishnakumar and S. Lalitha2(2014) .The study of Deepa Mohan and Sudarsan (2014) also not supports this result .They found that stress related to the organization were not influenced by emotional intelligence and any action taken to enhance emotional intelligence by the organization to minimize stress would not be materialized. Singh and Singh (2008) found a negative relation between emotional intelligence and stress for both the genders of medical professionals.

The result reveals that self -awareness is the significant predictor of occupational stress. This result is consistent with the result of Shojaei (2011), who stated that self-control, cooperation, and self-awareness explained significant variance in occupational stress.

The result of hierarchical regression shows that emotional intelligence influences the strength of the relationship between occupational stress and workplace happiness. The influence is strong in moderate emotional intelligence level. Pau et. al (in NINA OGIŃSKA-BULIK, 2005) stated that individuals with high level of emotional intelligence were expected to accept more evidence and consideration, social, organizational and time-management skills. The individual's capability to successfully deal with emotions in the workplace helps in managing occupational stress and to maintain psychological well-being (NINA OGIŃSKA-BULIK, 2005).

7.6 Relation between Occupational Stress and Locus of Control

This section of the chapter deals with the objectives and hypotheses related to the relationship between occupational stress and locus of control ((i.e. Internal or External) of medical doctors of North Bengal.

The table 7.30 reveals that out of 83 internal doctors 8 (9.63%) have a high level of occupational stress, 62 (74.69%) have a medium level and 13(15.68%) have a low level of occupational stress. Approximately 47% of external doctors have a high level of occupational stress and 47% external doctors have a medium level of occupational stress. Approximately 6% external doctors have a low occupational stress level.

Table 7.30 OS Profiles of Doctors Based on Loc Type (Internal & External)

EI/Loc	Low	Medium	High
Internal Loc	13	62	8
External Loc	1	9	9

Source: Compiled from survey data

Hypothesis Testing

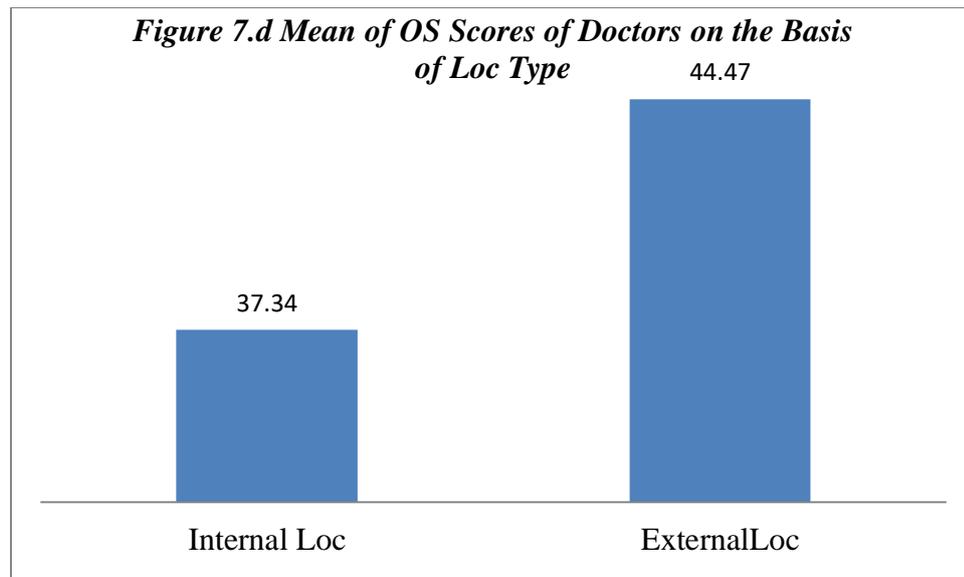
Sub-hypothesis one: There is a significant difference in Occupational Stress on the basis of Locus of control (internal & external).

Table 7.31 Mean of OS of Doctors Based on Loc Type

	No.	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Internal	83	37.3494	7.54892	.82860	35.7010	38.9978	13.00	50.00
EXTERNAL	19	44.4737	9.33553	2.14172	39.9741	48.9733	25.00	62.00
Total	102	38.6765	8.34072	.82585	37.0382	40.3147	13.00	62.00

Sources: Compiled from survey data

Table -7.31 shows that in the sample the mean of occupational stress of internal doctors and external doctors is 37.34 and 44.47 respectively. At 95% confidence interval, in the population, the upper limit of the mean of occupational stress scores of internal doctors is 38.99 and for external doctors are 48.97. In the population, the lower limit of the mean of occupational stress of internal locus of control of medical doctors and of external locus of control of medical doctors is 35.70 and 39.97 respectively.



In the Table 7.32, we find that the probability calculated ($p=.001$) is less than $ALFA= 0.05$. Hence, we conclude that our experiment does provide evidence that the difference in mean of occupational stress on the basis of internal and external Loc of medical doctors is statistically significant in the population.

Table 7.32 ANOVA Analysis Based on Loc Type Variation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	784.719	1	784.719	12.572	.001
Within Groups	6241.604	100	62.416		
Total	7026.324	101			

Sources: Compiled from survey data

Inference: We can accept the sub- hypothesis. It can be inferred that there is a significant difference in mean of occupational stress of internal and external Loc type of doctors or we can say that locus of control (i.e. internal and external) effects occupational stress of medical doctors.

Sub-hypothesis two: There is a negative relation between Occupational Stress and Loc type (internal & external).

Pearson's Correlation is applied to assess the nature of the relationship between occupational stress and Loc type. Table- 7.33 shows that there is a significant ($p<...05$) negative correlation between internal locus of control and occupational stress. Pearson's Correlation coefficient r for the relation between occupational stress with external Loc is ($r= .321$) not significant. The hypothesis is partially accepted.

Table 7.33 Correlations between OS and Loc Type

		STRESS	INTERNAL	EXTERNAL
STRESS	Pearson Correlation	1	-.286**	.099
	Sig. (2-tailed)		.004	.321
	N	102	102	102
INTERNAL	Pearson Correlation	-.286**	1	.172
	Sig. (2-tailed)	.004		.083
	N	102	102	102
EXTERNAL	Pearson Correlation	.099	.172	1
	Sig. (2-tailed)	.321	.083	
	N	102	102	102

Source: Compiled from survey data: Correlation is significant at the 0.01 level (2-tailed).

Inference: Thus the sub- hypothesis is partially proved. There is a significant negative relation between Internal Loc and occupational stress and external Loc is not statistically related to occupational stress.

Sub-hypothesis three: Internal Locus of control moderates the relationship between Workplace Happiness and Occupational stress.

To test the moderating effects of internal Loc on the relationship between occupational stress and workplace happiness hierarchical regression (recommended by Baron and Kenny, 1986) is done. To reduce the problem of multicollenierity the dependent variable and the independent variable are centralized (Fazier, Tix and Baron, 2004). Tolerance values of less than .10 and VIF (Variance Inflation Factor) values of greater than 10 show a multicollinearity problem (Cohen, Cohen, West, & Aiken, 2003) in regression analysis. In this study, the tolerance values are between .670 and 1, and the VIF values are between 1 and 1.493. These results indicate that there is no problem of multicollinearity (Asım Çivitci, 2015).

In table-7.34, in step- 1 the independent variable occupational stress explains 41% variance in dependent variable i.e. workplace happiness. In step- 2 when Loc (internal) is added to the equation the R Square is significant and explains 47.6% variance. In step-3 when interaction effect of internal Loc on occupational stress is added R square is then also significant and explains 55.6% variance and R square change has increased by .080 (table-7.34) in step-3 . Thus it confirms that Loc

(internal) acts as a moderator between the relationship occupational stress and workplace happiness.

Table 7.34 The Results of Hierarchical Regression Analysis for the Moderating Effects of Internal Loc on the Relationship between Occupational stress and workplace happiness

variable	B	Beta	T	R ²	R ² Change
Step-1 Occupational stress	-21.106	-.640	-8.332*	.410**	.410**
Step-2 Occupational stress Loc(internal)	-18.579 2.698	-.563 .268	-7.422** 3.535**	.476**	.066**
Step-3 Occupational stress Loc Occupational stress*Loc(internal)	-17.601 .884 4.484	-.534 .088 .424	-5.565** 1.070** 4.215**	.556**	.080**

Source: Compiled from survey data; Dependant variable Workplace Happiness

The beta coefficients in table 7.34 reveal that in step -1 occupational stress ($\beta = -.640$, $p < .001$) has a significant negative relation with workplace happiness and in step-2 internal Loc ($\beta = .268$, $p < .001$) has a significant positive relation with workplace happiness. Step three (table 7.34) shows that interaction of occupational stress and Loc (internal) significantly predict workplace happiness. The significant result of $R^{2\text{ change}}$ (table 7.34) in step three indicates that there are moderation effects of Loc (internal) on the relationship between occupational stress and workplace happiness. Our experiments fulfill all the three condition of moderation regression. The interaction chart (annexure-E-2) shows that interaction effect is strong among the doctors who have a high level of internal Loc. They are better able to manage their occupational stress and increase workplace happiness. Thus we accept the sub-hypothesis that Loc (internal) acts as a moderator between occupational stress and workplace happiness.

Inference: Our experiment provides evidence that internal Loc plays a buffering role to reduce occupational stress and to increase workplace happiness of doctors.

7.6.1 Discussion

In this part of the research, the researcher tries to find out the relationship between internal locus of control, external locus of control, and occupational stress. One way ANOVA analysis states that Loc type significantly affects occupational stress level. Doctors with internal Loc are less stressed than external doctors. Pearson correlation results exhibit that the relationship between internal Loc type and occupational stress is negative and this relation is statistically significant. It can be concluded that higher level of internal Loc is related to lower level of occupational stress. On the other hand, the relation between external Loc type and occupational stress is positive but statistically not significant. These findings are similar to the findings of many previous researches. Vasiliki Brouskeli and Angelos Markos (2013) found external Loc showed a tendency to experience more stress. Rajiv Kumar Jha and Bushara Bano (2012) also found that internal employees faced less job stress compare to external employees. Their findings establish and supplement the present finding that the internal locus of control is negatively correlated with organizational stress and external locus of control is positively correlated with stress. Douglas S. Mulbury (1995) reported an individual with an external locus of control was significantly related to higher stress and had lower achievement orientation.

The result of hierarchical regression shows that Loc (internal) plays a role of moderator in controlling occupational stress and increasing workplace happiness. This result is consistent with the result of A.P. Singh and Nitu Singh (2014) and many others. As a personality trait, Loc plays an important moderating role to affect the occupational stress. The studies showed that internal locus of control was very effective in controlling stress and managing its negative impacts. Internals could take their own decision and also decide the outcome of the action. As a result, internal may control and predict the situation and keep them engaged in work and adapt stress management strategies to stay healthy (A.P. Singh and Nitu Singh,2014).

Steliana Rizeanu (2016) also reported that locus of control as personality trait moderated stress in a given psychological state. Angela C. Roddeenberry (2007) explored that Loc only partially mediated the relationship between stress and illness.

7.7 Conclusion

The research hypothesis that there exists a negative relationship between occupational stress, emotional intelligence and workplace happiness is acceptable. The demographic variables (Gender, age education, and experience) are not significant in determining occupational stress. It is due to the sampling fluctuation that the difference in mean scores of the demographic variables with regards to occupational stress that was observed.

Internal locus of control and emotional intelligence play the role of moderator in the relationship between workplace happiness and occupational stress .Both the variables are strong predictors of occupational stress. Doctors with a good score of emotional intelligence and internal type of locus of control can regulate their occupational stress level better which help to increase their job happiness.

Chapter-Eight

Conclusion

8.1 Introduction

The study was carried out to examine the relationships between personalities, multiple intelligences, emotional intelligence, occupational stress and workplace happiness among medical doctors of North Bengal in West Bengal. The purpose of this final chapter is to summarize the findings of the research and to discuss the implications of the study. Limitation of the present study and future direction of research work are also discussed.

8.2 Summary of Findings

Findings of the present study may be summarized as under:

Profile of the Doctors

The findings show that 84% of the doctors are males and the rest 16 % are females. 61% of the doctors are in the age group of 25-30. 18.63% are in the age group of 31-40. It is apparent that the majority of doctors are under 40 years. 5.88% is in the age group of above 50. Majority of the doctors (58.82%) have post graduation degree and 41.18% of the doctors are the graduate. The results reveal that 18.63% of doctors fall in the category of senior level and 21.57 % of doctors come in the category of middle level and remaining 59.60% of doctors fall in the category in junior level.

Level of Workplace Happiness

The results show that 9.8 % of doctors have very high level of workplace happiness and 7.8 % have very low level of workplace happiness. 32.4% of the doctors are moderately happy at work. 40.2% of the doctors and 9.8% of the doctors are respectively happy and unhappy at work. The result of one sample t-test states that doctors have moderate to high level of workplace happiness.

Difference between Gender and Workplace Happiness

The F-value for gender and workplace happiness is .966 which is insignificant stating that there is no significant difference between gender and workplace happiness.

Difference between Age Group and Workplace Happiness

The F-value for age group and workplace happiness is 1.880 which is insignificant stating that there is no significant difference between age group and workplace happiness.

Difference between Educational Qualification and Workplace Happiness

The F-value for educational qualification and workplace happiness is 1.794 which is insignificant indicating that there is no significant difference between educational qualification and workplace happiness

Difference between Experience and Workplace Happiness

The F-value for experience and workplace happiness is .543 which is insignificant indicating that there is no significant difference between experience and workplace happiness.

Work Attributes Responsible for Workplace Happiness

The five most important work attributes responsible for workplace happiness rated by the doctor are salary, interesting work, work-life balance, positive impact on society and autonomy at work. 24.5% of the doctors ranked salary as the most important factor for their workplace happiness and 1% of the doctors considered factor acceptable work demands as important for their workplace happiness. 31% of the doctors are highly satisfied with job-security .27% of the doctors satisfied with good relation with the colleague .Acceptable work demand, Location of work and safe working condition are among the top five satisfied work attributes. Autonomy at work and interesting work are highly valued by doctors as most important work attributes for their happiness at work but both the attributes scored least in terms of satisfaction. Pearson correlation results indicate the positive impact to society, location of work, safe working conditions and advancement opportunities are the significant predictors of doctors' workplace happiness.

Personality Traits and Personality Types

The doctors have predominant traits of extraversion (57%), sensing (53%), feeling (62%) and perceptive (59%). As a group doctors displayed E-S-F-P traits. North Bengal medical doctors have INFP type of Myers-Briggs Preference. ENTJ type is the least preferred personality of doctors. A larger (81.38%) percentage of the doctors have the internal type of locus of control. Only 19 doctors exhibit the external type of locus of control. The results clearly indicate the individual difference in personality type preferences among the doctors of North Bengal medical college in West Bengal

Multiple Intelligence (MI) Profiles of Doctors

Descriptive Statistics state that North Bengal medical college doctors have the advance level in logical/mathematical and interpersonal domains of MI, and moderate advancement level in verbal- linguistic, visual- spatial, musical-rhythmical, bodily-kinesthetic and intrapersonal intelligence domains. Intelligence plays an important role in individual's life. Assessment of intelligence types identified by Gardner provides a deeper and broader understanding of multiple intelligences in medical doctors. The result of the study depicts according to Gardner's MI test doctors differ in their abilities.

Relationship between Personality Types, Multiple Intelligences, and Workplace Happiness

ESFP type stands for maximum (2%) number of very happy doctors, but INFP (16%) personality types have the highest representation in the study. There are no differences in type preference between doctors who are very happy or very unhappy at work, nor is it possible to predict happiness from MBTI preference scores.

The results of the correlation coefficient between multiple intelligence domains and workplace happiness are not significant which states that there is no significant association exists between the multiple intelligence domains and workplace happiness. There are no differences in MI domains of doctors who are very happy or very unhappy at work

An individual with varied personality traits and multiple intelligences are valuable resources for the organizations /institutions. ISFJ, ENFP, ESFJ are common

personality types in both very happy and very unhappy doctors. The common personality types in both very happy and very unhappy doctors have different multiple intelligence factors. ISFJ with verbal-linguistic intelligence, ESFJ with logical/mathematical and ENFP with interpersonal intelligence are happy but ISFJ with logical/mathematical, ESFJ with rhythmic and ENFP with logical/Mathematical intelligence are unhappy.

Relationship between Locus of control (Internal and External) and Workplace Happiness

The correlation coefficient between internal locus of control and workplace happiness is .429 which reveals 42 percent positive relationship and is significant at 1% level.

The correlation coefficient between external locus of control and workplace happiness is -.058 which reveals the negative relationship.

All very happy doctors have the internal type of locus of control and all very unhappy doctors have the external type of locus of control. ANOVA analysis reveals that doctors with an internal locus of control are happier than external locus of control.

Level of Emotional Intelligence

The results depict 29.42% of the doctors have a high level of emotional intelligence, 67.64 % of the doctors have a medium level of emotional intelligence and only 3.94% have a low level of emotional intelligence. The result of t –test confirmed that doctors have expressed a high level of emotional intelligence.

Relationship between Emotional Intelligence and Workplace Happiness

The correlation coefficient between emotional intelligence and workplace happiness is .535 which reveals 53 percent positive relationship and is significant at 1% level.

The correlation coefficient between self- awareness and workplace happiness is .342 which reveals 34 percent positive relationship and is significant at 1% level.

The correlation coefficient between self- regulation and workplace happiness is .287 which reveals 28 percent positive relationship and is significant at 1% level.

The correlation coefficient between self- motivation and workplace happiness is .442 which reveals 44 percent positive relationship and is significant at 1% level.

The correlation coefficient between social- awareness and workplace happiness is .361 which reveals 36 percent positive relationship and is significant at 1% level.

The correlation coefficient between social- skills and workplace happiness is .480 which reveals 48 percent positive relationship and is significant at 1% level.

The results of ANOVA show that there is a significant difference in workplace happiness on the basis of the emotional intelligence levels of doctors'. All the very happy doctors of the study are highly emotional intelligent and all the very unhappy doctors have a low level of emotional intelligence.

Level of Occupational Stress

The results depict 16.66% of the doctors have a high level of occupational stress, 69.62 % of the doctors have a medium level of occupational stress and only 13.72% have a low level of occupational stress . The result of t –test confirmed that doctors of North Bengal medical college are not highly stressed in their service.

Relationship between Occupational Stress and Workplace Happiness

The correlation coefficient between occupational stress and workplace happiness is -.640 which reveals 64 percent negative relationship and is significant at 1% level.

The results of ANOVA show that there is a significant difference in workplace happiness on the basis of occupational stress levels of doctors'. 90% of the very happy doctors of the study have a low level of occupational stress and all the very unhappy doctors of the study are highly stressed.

The results of the Pearson correlation test depict that out of thirteen factors of occupational stress twelve factors are negatively and significantly related to workplace happiness. The results also show that workload, peer-relation, time, work-overload and work-life balance are the five most important sources of the occupational stress of medical doctors.

Relationship between Occupational Stress and Emotional Intelligence

The correlation coefficient between occupational stress and emotional intelligence is $-.520$ which reveals 52 percent negative relationship and is significant at 1% level. Pearson's correlation results also show that all the five components of emotional intelligence are adversely related to occupational stress and this relation is statistically significant.

The results of ANOVA show that there is a significant difference in occupational stress on the basis of doctors' emotional intelligence level.

Relationship between Occupational Stress and Locus of control (internal and external)

The correlation coefficient between occupational stress and internal locus of control is $-.289$ which reveals 28 percent negative relationship and is significant at 1% level.

The correlation coefficient between occupational stress and external locus of control is $-.099$ which reveals negative relationship but this relation is statistically not significant.

The results of ANOVA show that doctors with an external locus of control are highly stressed in service than doctors with an internal locus of control type.

The Moderator Role of Emotional Intelligence on the Relationship between Occupational Stress and Workplace Happiness

To assess the degree to which emotional intelligence moderates the relationship between occupational stress and workplace happiness, a moderation model is developed. A multiple hierarchical regression is applied to find out the main effect of the occupational stress and emotional intelligence, and the interaction effect between occupational stress and emotional intelligence. In step one, occupational stress is entered and emotional intelligence is entered at the second step. At step three, an interaction term between occupational stress and emotional intelligence is entered to signify the interaction between the predictor (occupational stress) and the moderator (emotional intelligence) on the dependent variable (workplace happiness). The findings state that emotional intelligence plays a significant role of moderator in the relationship between workplace happiness and occupational stress. The strength of

association between occupational stress and workplace happiness is influenced by emotional intelligence. Doctors with moderate emotional intelligence level are able better to manage their occupational stress level and to boost workplace happiness level.

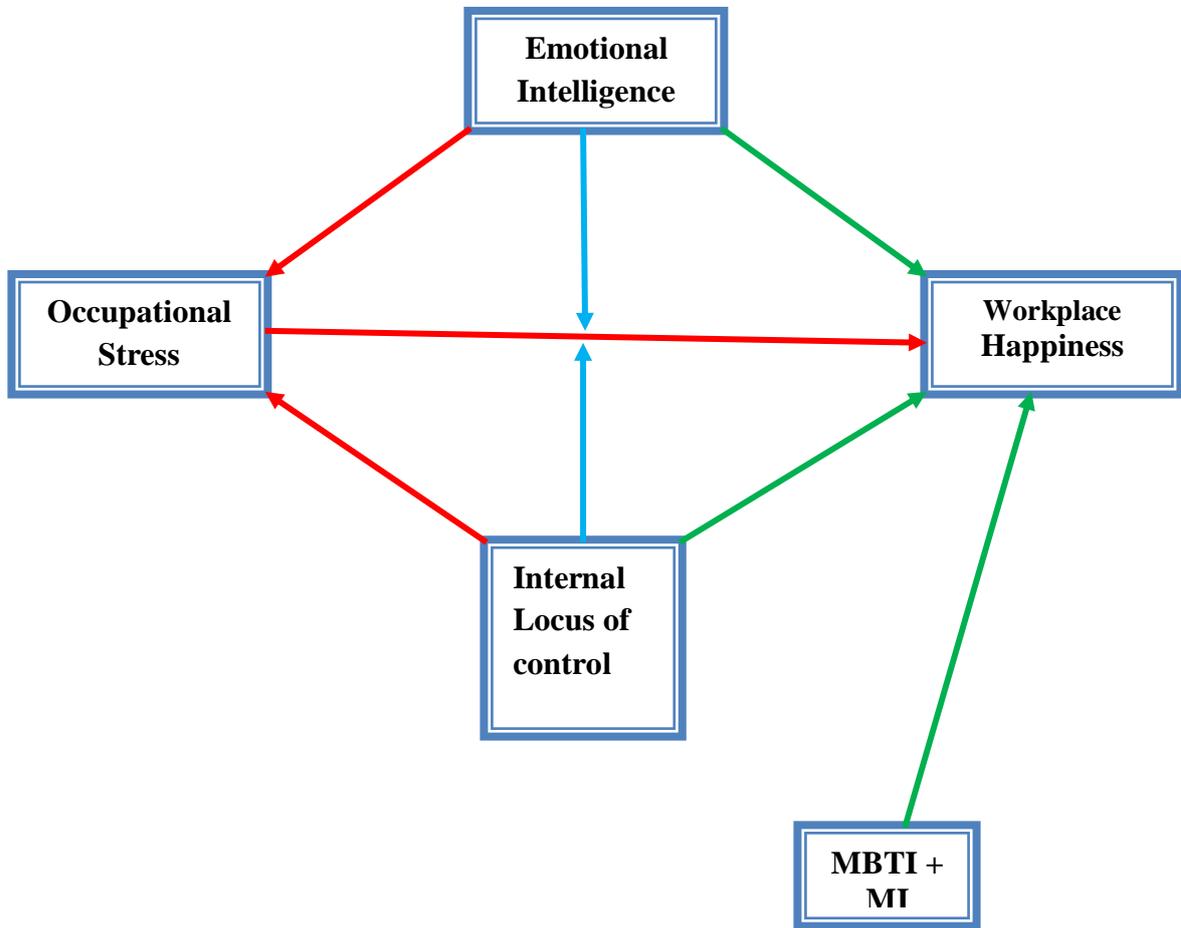
The Moderator Role of Internal Locus of control on the Relationship between Occupational Stress and Workplace Happiness

To determine whether the internal locus of control moderates the relationship between occupational stress and workplace happiness, a moderation model is developed. A hierarchical regression is used to examine the main effect of occupational stress and internal locus of control, and the interaction effect between occupational stress and internal locus of control. In step one, occupational stress is entered and at step two, emotional intelligence is entered. At step three, an interaction term between occupational stress and internal locus of control is entered to represent the interaction between the predictor (occupational stress) and the moderator (internal locus of control) on the dependent variable (workplace happiness). The findings show that internal locus of control plays a significant role of moderator in the relationship between workplace happiness and occupational stress. The strength of association between occupational stress and workplace happiness is influenced by an internal locus of control. Doctors with the high level of internal locus of control are able better to manage their occupational stress level and to boost workplace happiness level.

Conclusion

The following (8.a) figure depicts the overall findings of the study. Medical doctors have moderate to high level of workplace happiness. In the present study, the non-significant differences in workplace happiness observed on the basis of demographic variables (gender, age, educational qualification, and experience in profession). The influence of four demographic factors considered in the present study is not significant in ascertaining the level of happiness. The Study results show that doctors are not satisfied with the work attributes which they considered are important for their workplace happiness. The result shows that there is a difference in the combination of MBTI (Myers-Briggs Type of indicator) and MI (Multiple Intelligences) of very happy and very unhappy doctors.

8a. Diagram Represents Summary of Findings of the Study



In the figure, we also see that according to the statistical results emotional intelligence positively related to workplace happiness and there is an adverse relationship between emotional intelligence and workplace happiness. A higher level of emotional intelligence and workplace happiness enables doctors to communicate better with their colleagues, principal, nurses, subordinates, and patients. Higher level of emotional intelligence is related to lower levels of occupational stress. By enhancing emotional intelligence authority would decrease occupational stress. The figure 8.a shows that, according to study results internal locus of control is positively related with workplace happiness and negatively with occupational stress. Individuals with internal Loc perceived their control over events and considered less to negative events (Lindiwe M. Sindane, 2011).Internal locus of control and emotional

intelligence play the role of moderator in the relationship between workplace happiness and occupational stress .Both the variables are strong predictors of occupational stress. Doctors with a good score of emotional intelligence and internal type of locus of control can regulate their occupational stress level better which help to increase their job happiness.

8.3 Uniqueness of the study

This study is unique in the sense that it measures the influence of two psychometric tools on workplace happiness at a time. One is MBTI and another one is Gardener's MI; on which very little research work has been done. The knowledge of personality types and MI domains of a very happy individual helps in human resource management in public sector undertakings. This research examines the workplace/job happiness and job/occupation stress at a time. In this sense, it is also unique. The uniqueness of the present study is that it raises the question/doubt that whether EI and internal Loc jointly play the buffering role in the relationship between OS and workplace happiness. The present study is different in the way that it identifies the personalities, MI, EI and OS of very happy and very unhappy individuals.

8.4 Implications of the study

The outcomes of the present research have much practical implications from the applied point of view.

- People are spending most of their lives in their working environments. Therefore, this study is appropriate because it tackles the issue of happiness in the workplace. This study identifies the happiness/unhappiness level of doctors and also the factor responsible for happiness. This will help the top authority to know the problem areas which is leading to unhappiness among doctors and so reducing their performances.
- This study gives a scope to know and understand the happiness and satisfaction level of doctors of the medical college. Top Authority can use the findings of this study to formulate strategies and develop interventions for increasing employees' happiness.

- Identification of personality types, personality traits, and MI enable individual and employer to know strength and weakness of individuals and employees. Identification and admiration of diverse skills, abilities and preferences give confidence to individual to contribute to their maximum ability. As a result individuals' will be aware of their own strengths - weaknesses and they will improve their strength to attain desired results.
- The knowledge of very happy individuals' personality types and MI profiles could help in employee selection and recruitment process.
- Assessment of EI ensures the quality of the individual who is well informed, more aware and intelligent.
- The present study gives an insight into the relationship between workplace happiness and EI, and its components. By proper training and education of EI authority could increase happiness level of doctors and while designing the programme of training attention should be given to the EI dimensions. The knowledge of EI level may help management in selection and recruitment process.
- Occupational stress lower workplace happiness. Identification of stressors helps administrator to take necessary action so that by increasing happiness it would be possible to render quality health care services.
- Doctors with high EI are happy and less stressed. Doctors with internal loc type are also happy, have a high EI level and low OS. The knowledge of these findings could to use by the authorities when recruiting the health professional for health institution.
- The findings of this study can be used to help professionals in more methodically accepting doctors knowledge regarding their personality ,MI ,workplace happiness, occupational stress and familiarity of other emotion.

8.5 Limitations of the study

The assessment of the impact of any psychometrics tools on employees work behavior is more of cognitive nature. So, to a great extent, the evaluation will depend on the individual's perception of the subject. Therefore it will not possible to quantify accurately in quantitative terms. The researcher with the help of standardized

instruments have tried to appraise the level of OS and workplace happiness as could be possible with given individual constraints of the researcher.

- Positive response ratio was very less. Due to time constrained for most of the doctors', less number of doctors replies truly.
- The data were collected from one medical college. The inclusion of more medical colleges for the collection of data would have portrayed better result of the research.
- MBTI lacks application of statistical techniques.
- The self-report approach was followed to collect data; there could be a possibility that respondents may distort responses.
- There is the issue of sample size. The generalization of the results is rather difficult as the data were collected from one hundred and two respondents.
- The sample of the study consisted only doctors, who are working in medical college. So, there is a difficulty in the generalization of the research findings in a different population.
- If this research is conducted with a big sample size and more consistent instrument the relationship between variables would be more considerable.
- No response to some questions by some respondents was also an important limitation of the research.

8.6 Future Direction

The following list represents the possibilities of future studies and also researches recommended based on the present study

- The same study will be done in different context.
- An experimental study of the measurement of happiness level, before and after of training of emotional intelligence would give a strong support of the claim made in the present study.
- A comparative study can be carried out between private and public health care centre.

- Different measuring tools could be used in the same sample group with the same research question.
- A research can be conducted with different sampling or with a different population.
- This study took doctors as a sample .The future study could be carried out to test the same hypotheses with other health professionals.
- The same study may be conducted in the same sample group by applying the different analytical tools.

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- worldhappiness.report/wp-content

Annexure-A: The Four Dichotomous Dimensions of the MBTI

Energy orientation	
Extraversion (E)	Introversion (I)
1.energy is directed mainly toward the outer world of people and objects 2.energised by interaction and action 3.concrete, experiential learning style 4.tend to be sociable and expressive (not “loud” and “talkative”)	1.energy is directed mainly toward the inner world of experiences and ideas 2.energised by inner world and ideas 3.reflective, observational learning style 4.tend to be private and contained (not “shy” and “inhibited”)
Taking in information (perceiving)	
Sensing (S)	Intuition (N)
1.information is taken in by observing reality through the senses 2. <i>“facts speak for themselves”</i> 3.tend to be concrete, practical, specific and observant 4.tend to build carefully to conclusions, and to trust experience 5.oriented to present reality	1.information is taken in by seeing patterns, relationships and connections between facts 2, <i>“facts illustrate principles”</i> 3.tend to be imaginative and creative, and to focus on broad patterns and meaning 4.tend to move quickly to conclusions, and to trust intuition and inspiration 5.oriented to future possibility
Making decisions (judging)	
Thinking (T)	Feeling (F)
1.decision–making is based on objective, logical analysis 2.fairness means that everyone is treated equally 3.tend to critique and analyse 4.strive for objective truth .(not “cold–hearted”)	1.decision–making is based on personal, subjective values 2.fairness means that everyone is treated as an individual 3.tend to empathise and honour 4.strive for harmony and understanding (not “emotional” or “irrational”)
Dealing with the external world	
Judging (J)	Perceiving (P)
1.prefer the decisiveness and closure that result from dealing with the world using one of the Judging processes (Thinking or Feeling) 2.tend to be scheduled and systematic 3.like to have things decided 4.feel stressed by last–minute pressures (not “judgemental”)	1.prefer the flexibility and spontaneity that result from dealing with the world using one of the Perceiving processes (Sensing or Intuition) 2.tend to be spontaneous and flexible 3.like to have things open to change 4eel energised by last–minute pressures (not “perceptive”)

Source: Myers, McCaulley at al. (1998); Myers (1999) in Leonie Tickle,2009

Annexure B: Personality Characteristics of Each Type Preference

Sensing Types		Intuitive Types	
<p>ISTJ Serious, quiet, earn success by concentration and thoroughness. Practical, orderly, matter-of- fact, logical, realistic, and dependable. See to it that everything is well organized. Take responsibility. Make up their own minds as to what should be accomplished and work toward it steadily, regardless of protests or distractions</p>	<p>ISFJ Quiet, friendly, responsible, and conscientious. Work devotedly to meet their obligations. Lend stability to any project or group. Thorough, painstaking, accurate. Their interests are usually not technical. Can be patient with necessary details. Loyal, considerate, perceptive ,concerned with how other people feel.</p>	<p>INFJ Succeed by perseverance, originality, and desire to do whatever is needed or wanted. Put their best efforts into their work. Quietly forceful, conscientious, concerned for others. Respected for their firm principles. Likely to be honored and followed for their clear convictions as to how best to serve the common good.</p>	<p>INTJ Usually have original minds and great drive for their own ideas and purposes. In ields that appeal to them, they have a fine power to organize a job and carry it through with or without help. Skeptical, critical, independent, determined, sometimes stubborn. Must learn to yield less important points in order to win the most important</p>
<p>ISTP Cool onlookers—quiet, reserved, observing and analyzing life with detached curiosity and unexpected flashes of original humor. Usually interested in cause and effect, how and why mechanical things work, and in organizing facts using logical principles.</p>	<p>ISFP Retiring, quietly friendly, sensitive, kind, modest about their abilities. Shun disagreements, do not force their opinions or values on others. Usually do not care to lead but are often loyal followers. Often relaxed about getting things done, because they enjoy the present moment and do not want to spoil it by undue haste or exertion.</p>	<p>INFP Full of enthusiasms and loyalties, but seldom talk of these until they know you well. Care about learning, ideas, language, and independent projects of their own. Tend to undertake too much, then somehow get it done. Friendly, but often too absorbed in what they are doing to be sociable. Little concerned with possessions or physical surroundings.</p>	<p>INTP Quiet and reserved. Especially enjoy theoretical or scientific pursuits. Like solving problems with logic and analysis. Usually interested mainly in ideas, with little liking for parties or small talk. Tend to have sharply defined interests. Need careers where some strong interest can be used and useful</p>
<p>ESTP Good at on-the-spot problem solving. Do not worry, enjoy whatever comes along. Tend to like mechanical things and sports, with friends on the side. Adaptable, tolerant, generally conservative in values. Dislike long explanations. Are best with real things that can be worked, handled, taken apart, or put together.</p>	<p>ESFP Outgoing, easygoing, accepting, friendly, enjoy everything and make things more fun for others by the enjoyment. Like sports and making things happen. Know what’s going on and join in eagerly. Find remembering facts easier than mastering theories. Are best in situations that need sound common sense and practically ability with people as well as with things</p>	<p>ENFP Warmly enthusiastic, high-spirited, ingenious, imaginative. Able to do almost anything that interests them. Quick with a solution for any difficulty and ready to help anyone with a problem. Often rely on their ability to improvise instead of preparing in advance. Can usually find compelling reasons for whatever they want.</p>	<p>ENTP Quick, ingenious, good at many things. Simulating company, alert and outspoken. May argue for fun on either side of a question. Resourceful in solving new and challenging problems, but may neglect routine assignments. Apt to turn to one new interest after another. Skillful in finding logical reasons for what they want</p>
<p>ESTJ Practical, realistic, matter-of-fact, with a natural head for business or mechanics. Not interested in subjects they see no use for, but can apply themselves when necessary. Like to organize and run activities. May make good administrators, especially if they remember to consider others’ feelings and points of view</p>	<p>ESFJ Warm-hearted, talkative, popular, conscientious, born cooperators, active committee members. Need harmony and may be good at creating it. Always doing something nice for someone. Work best with encouragement and praise. Main interest is in things that directly and visibly affect people’s lives</p>	<p>ENFJ Responsive and responsible. Generally feel real concern for what others think or want, and try to handle things with due regard for the other person’s feelings. Can present a proposal or lead a group discussion with ease and fact. Sociable, popular, sympathetic. Responsive to praise and criticism.</p>	<p>ENTJ Hearty, frank, decisive, leaders in activities. Usually good in anything that requires reasoning and intelligent talk, such as public speaking. Are usually well informed and enjoy adding to their fund of knowledge. May sometimes appear more positive and confident than their experience in an area warrants.</p>

Source: Angela Alexander,2004

Annexure C: Gardner's Eight Intelligences

Intelligences	Description
Linguistic	A capacity to use word efficiently either orally or writing. This intelligence relies on the figure representation of words and is articulated through reading, writing, listening, and speaking
Logical-Mathematical	A capacity to use number effectively, develops equations and proofs, make calculations, solve abstract problems and reasoned well. Skilled analyzing, inducing, deducing, estimating, predicting, organizing, sequencing, questioning, and experimenting.
Spatial	A capability to identify and manipulate large-scale and fine-grained spatial images. This intelligence involves spatial relations and visual images and sensitivity to color, line, shape, form, space
Musical	A capacity to produce, remember, transform , perceive express and make meaning of different patterns of sound. Express emotion and feelings through music. sensitive to rhythms, melodies, lyrics, pitch, timing, and timbre
Naturalist	A capacity to identify and distinguish among different types of plants, animals, and weather formations that are found in the natural world. worry about natural phenomena and responsive to the interrelationships among living things and interact efficiently with nature and animal to recognize their behavior and requirements
Bodily-Kinesthetic	A capability to apply one's own body to make products or solve problems. This intelligence includes particular physical skills such as sense of time ,coordination, balance, dexterity, strength, flexibility, and speed,
Interpersonal	A capacity to identify and make distinctions in the moods, desires, Motivations, intentions and feelings of other people's. Communicate and interact with others, work in a team and display leadership skills.
Intrapersonal	A capacity to know and comprehend his or her own moods, desires, Motivations, temperament, intentions and the ability for self-discipline, self-understanding, and self-esteem. Self-knowledge and the talent to work adaptively on the basis of that knowledge.

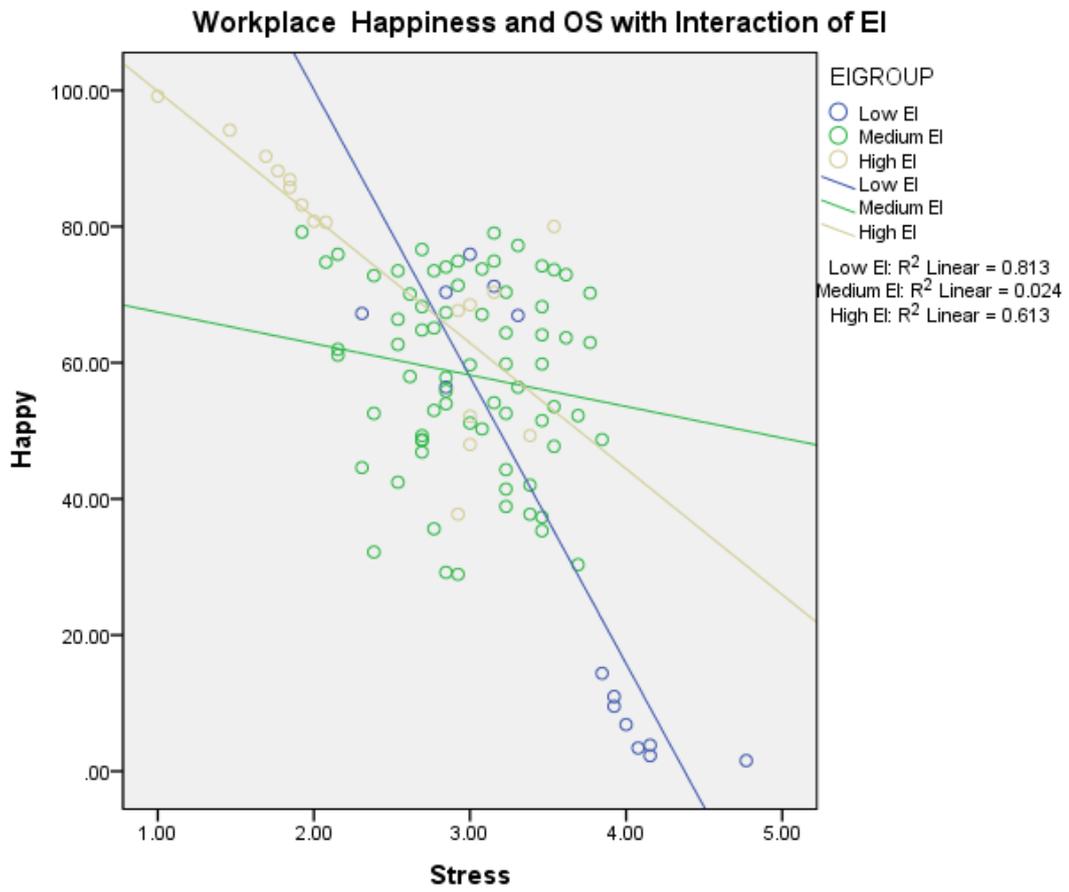
Source: Joseph Walsh, The Psychological Person; The Multiple Dimensions of Person and Environment

Annexure D: Potential sources of occupational Stress

Probable sources of occupational Stress	
Individual stress (Perception of the problems, results and self, etc.)	The external environment (the economic and the technological condition)
	The organisational structure and culture (management style and type of hierarchical structure , etc)
	The relationship at work (The quality of relationship with the colleague, heads and , with the subordinats, etc.)
	Personal factors (motivation, personality, skills and intelligence, etc.)
	Characteristics of the job position(difficulty in labour ,etc)
	The domestic social situation (debt, illnesss and death of someone close, ect.)

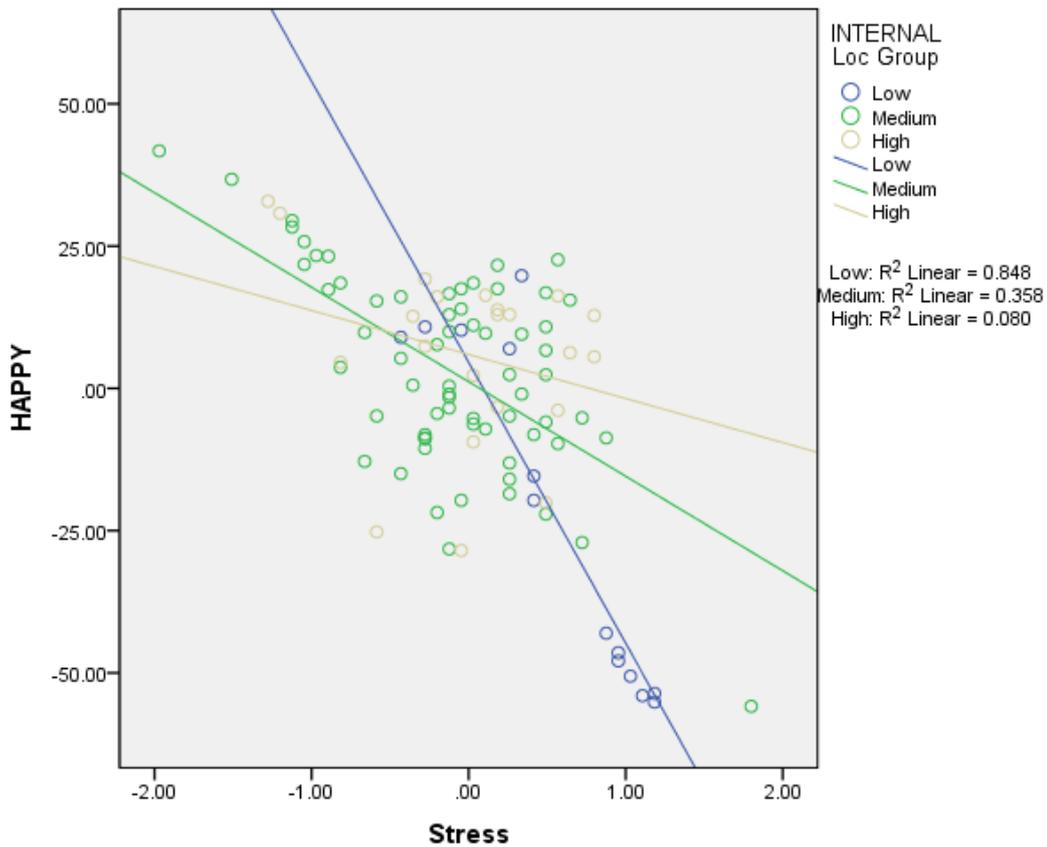
Sources: Cole, G.A. (2000 ,in Dr,Stefan Ivanko, 2013)

Annexure –E-1: Regression Chart



Annexure ---- E-2: Regression Chart

Workplace Happiness & OS with Interaction of EI



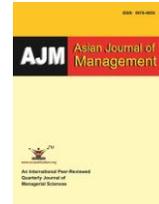
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RESEARCH ARTICLE

An Empirical Study of Medical Doctors Occupational Stress

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ABSTRACT:

The aim of this research is to examine youth attitude towards organic food products in Salem District with special reference to college students. In today's society whereby rapidly growing day-by-day, it is one of the main causes for changes in the environment. This study to explore trend of having food life style and to examine the factors that influence youth's eating habits, looking especially college students. Students today have busy lives because they are not only students at workers, volunteers, and participants in campus organizations. And also this study is to find youth's level of health consciousness towards what they consume regularly. Zoom in further, this research will be targeted on youth generation especially college students.

KEYWORDS: Doctors, stress, occupation, medium and workload.

INTRODUCTION:

At present days stress at the work-place has become a major cause of concern. Stress at workplace reduces workers satisfaction, productivity, increase absenteeism and turnover (Gianakos, 2001) and organizations suffer a huge financial loss (Badran Abdulrahman Al-Omar, 2003). At a certain level of stress is desirable and positively motivate individual (Edward, 2011). On the other hand, too much stress affects physical and mental states of person (Niemi and Valniomaki, 1999). Stress is a complex relation between a person and his/her work environment.

It refers to the circumstances at which a person's skills and ability do not match with the work demands and requirements, and/or when the employees' needs are not fulfilled by the job environment (Ramirez et al., 1996). Stress is a self-motivated state in which the individual is confronted with an option, self-control, or demand associated to what he or she desires and for which the result is supposed to be both uncertain and important. (M. Prasad, 2017)

The Medical profession is considered to be highly stressful because the responsibility of people lies on doctor rather than objects. The other cause that makes the doctor's profession more stressful is their strong impact on human life (Rees, Antonoiu in Hassan Danial Aslam et.al. 2013). Technological advancement has brought some significant financial and structural changes in medical profession. These changes include less health and retirement benefits. The professionals feel that to maintain same economic status they have to work more time and have to work hard. Structural changes includes an increase in the complexity of cases, knowledgeable patients and available treatment options, and also computer watch of service/ production The these changes influence workplace environment and causes burn out, and stress among health personals. (Sehlen S et al 2009 in Saha 2011).

A large number of researches have been conducted in stress analysis of doctors in different parts of the world. Very few studies have examined the stress level among medical doctors. Since there is a lack of such type of studies in determining the stress of medical doctors in West Bengal, the present study is intended to examine

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the sources /causes of stress among doctors of medical colleges in West Bengal in India.

LITERATURE REVIEW:

Sources of work-stress:

Research studies stated that there are many causes correlated with an occupational stress of doctors/general practitioners. Health care professionals compare to other professional possessed higher levels of pressure within their workplace (Rees, D. W. and Cooper, 1992) .The major sources of stress as recognized by researchers among physicians were: problems with practice administration, interruptions, patient’s expectations and demands, emergencies, heavy workload, constant time pressures and work/home conflict (IrfanaBaba, 2012). Schattner et. al (1998) got workload, economic factors, medico-political factors, clinical factors, effects of work on outside life, physical working environment as the factors of stress among metropolitan general practitioners. Burbeck et. al (2002) also discovered that work-related factor, the number of time posts significantly correlated with stress. Their logistic regression analysis exposed that 'being overstretched', 'effect of hours and stress on family life', and recognition' were significant predictors of stress, whereas 'the effect of stress on family life', low prestige of specialty, and 'dealing with management' predicted level of depression among consultants in accident and emergency medicine. Similarly , workload, night shifts and relation with peers have a positive relationship with levels of stress of public and private hospital’s doctors in Pakistan (Hassan Danial Aslam et.al.,2013). Saha et.al (2011) stated that doctors were generally in direct contact with the patients. Any interruption in giving the service or lack of information creates a distress among the patients or relatives that may add to the stress of these members Hussain and Singh (2002) conducted a study on the role stress of specialist doctors. In their study, the gynecologists and surgeons reported significantly higher stress than the Ophthalmologists on perceived stress effects. With this result, they came to the conclusion that the surgery or performing an operation was the source of stress for both gynecologists

and surgeons. The findings of Ramirez et al (1996) support this view. They got that radiologists had the highest level of burnout in terms of low personal accomplishment. In another study, Hussain (2001) found that the stress effects associated with stressful situations did not influence psychological well- being among surgeons.

Saini NK et.al (2010) conducted a cross-sectional study of resident doctors and found that one -third of resident doctors had stress problem. The main reasons of their stress were long duty hours, academic activities of the department, financial constraints, family and emotional problems. The key factors significantly associated with stress were an existence of children, year of residency, type of department, and presence or absence of job satisfaction, having close friends, spending time with family/friends, and place of graduation. Multivariate analysis revealed that year of residency, giving time to family and or friends, having close friends during residency, job satisfaction, and state of graduation were significant predictors of stress. The study of Aarti G Sahasrabuddhe et.al (2015) reported that heavy workload with long duty hours, poor accommodation and food, low stipend and lack of social and family life created stress among residence doctors of Mumbai. Burden of work, extended duty hours and, poor hostel facilities were also emerged as stressors in the study of Rajan and Bellare et.al (2011); of tertiary care Municipal hospital’s resident doctors in Mumbai .

Personal variables and Work-stress:

A British Medical Association (BMA) report (2000) showed that many senior doctors suffer high levels of stress .Work was the main stressor which directly hampers their ability to provide high -quality care to patients. Spurgeon et. al (2005) in a study on stress among Government hospitals found that older medical doctors were more stressed compare to younger doctors with new work demands and unrealistic patient demands was the factor of stress which caused more stress among younger doctors.

Table 1: Sources of Stress for Medical Professionals

Factors of stress	Findings	References to support the findings
JOB	Workload, Time pressure, Administrative duties, Sleep deprivation, No regular meals, Threat of malpractice , Having to work long hours Short breaks	Ramirez Et Al., 1996 Badran Abdulrahman Al-Omar,2003 Nusair And Deibageh, 1997 Deary Et Al., 1996 Saha Et.Al 2011
ORGANIZATION	Career structure, Career uncertainties, Inadequacy of resources and staff, Lack of senior support, Culture and climate of the organisation. Absence of appreciation, Role ambiguity and role conflict	Badran Abdulrahman Al-Omar,2003 Nusair and Deibageh, 1997: Irfana Baba 2013 Pestonjee 1999 Hussain and Singh 2002.
PEER RELATION	Staff conflict, Professional isolation, patient’s expectations and demands, level of support from friends and family.	Ramirez et al., 1996 Glowinkowski and Cooper, 1986

WORK LIFE BALANCE	Stress over spill from work to home and vice-versa, Lack of exercise and other leisure activities, lack of free time, Home demands, Disruptions to social life	Cooper et.al 1889 Ramirez et al., 1996 AL-Shammari, 1996
PERSONAL VARIABLES	Gender, Marital status, Education Age	Swanson and Power, 1999 Perry et al., 2000 Badran Abdulrahman Al-Omar,2003 HirakDasgupta and Suresh Kumar 2009

Swanson and Power (1999) conducted a comparative study between perceived stress, satisfaction, and conflict for male and female doctors. The study revealed that male doctors were more stressed and dissatisfied than females. Mostafaamr et al (2008) in their cross-sectional study among medical students found no significant difference among males and female students in the perceived stress. The study of HIRAK Dasgupta and Suresh Kumar (2009) also found that there was no difference between the stress levels among male and female doctors except in the case of the factors like inter-role distance and role inadequacy. And of these factors, the stress level among female doctors is much more than male.

Based on the literature review factors causing stress among doctors were identified. The interrelations between factors of stress and stress were supported by the previous studies (see Table 1).

OBJECTIVES:

The objectives of the present study are as follows

1. To study the level of stress of doctors
2. To study the relation between stress and demographic variables and
3. To identify the factors of stress among medical doctors.

HYPOTHESIS:

According to the importance of the subject the study wants to test the following mentioned hypothesis:

1. Doctors have high level of stress
2. There is a significant difference in stress on the basis of demographic variables (gender, age, educational level and experience in service) and
3. There is a significant relationship between factors of stress and stressors.

METHODOLOGY:

The study is quantitative and descriptive in its nature. For the purpose of study, primary data have been collected with the help of structured and closed - ended questionnaire from randomly selected 102 doctors working in West Bengal medical college. The questioner contains demographic variables and 13 items occupational stress scale of A.K.Srivastava. It is a five-pint Likert scale ranging from “Absolutely true”(value 5) to “Absolutely false” (value 1). The Cronbach’s alpha of this scale is .793.The collected data are analyzed with the help of statistical tools of descriptive statistics, One-way ANOVAs, and Pearson correlation. (M. Prasad, 2017)

Data Analysis and Interpretations:

Demographic variables and stress:

Table -2 Frequency and Percentage Analysis of Stress of Doctors Based on Demographic Variables:

Variables	Low	Medium	High
Gender:			
Female	2(14%)	9(13%)	5 (30%)
Male	12 (86%)	62(87%)	12 (70%)
Age Range 25-30			
31-40	5(36%)	47(66%)	10(59%)
41-50	4(29%)	14(20%)	1 (6%)
>50	4(29%)	5(7%)	6(35%)
	1(6%)	5(7%)	Nil
Education			
Bachelor’s	6(43%)	31(44%)	5(30%)
Master’s	8(57%)	40 (56%)	12 (70%)
Experience			
1-3	6(44%)	46 (65%)	9(53%)
4-7	2(14%)	9(13%)	3 (18%)
8-11	2(14%)	5(7%)	1(6%)
>11	4(28%)	11(15%)	4(24%)

Source: Compiled from survey data; Upto-30=Low,31-45=Medium and >45= High

The survey sheet reveals that out of 102 respondent 17 (16.66%) have a high level of stress, 70% have a medium and 14 (13.72%) have a low level of stress. A good number of respondents have a medium level of Stress. Table -2 reveals that out of seventeen highly stressed doctors 30% are female and 70% are male. Among the male doctors, 14% have high -stress level and 31% of female doctors have high level of stress. The percentage (67%) of low stress level is higher among male doctors.

Among the youngest doctors 2% (out of 62) have a high stress level and in the survey, there are no aged doctors who have high- stress level. Doctors in the age range 41-50 (40%) are highly stressed. Most of the young doctors have a medium level of stress. 30% doctors with a bachelor degree and 70% doctors with a master degree have high- stress level. Among the post graduate doctors 14% have high- stress level and 31% of graduate doctors have a high level of stress. The percentage (14%) of low stress level is higher among graduate doctors.

Among the highly stressed doctors 53% have one to three years of experience in service and 6% have experience of eight to eleven years. Junior doctors are dominant in all three stress groups .It may be that in the survey a maximum number of respondents have experience in service one to three years.

Hypothesis Testing:

H01: Medical doctors have high level of Stress:

Table-3 One-Sample Test

	Test Value = 38					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Stress	.819	101	.415	.67647	-.9618	2.3147

To test the hypothesis that medical doctors have a high level of Stress, one sample t -test is used. The mean score of medical doctors’ stress is 38.7665. The obtained t is not significant, $t(101) = .819, p = .415$ (table-3). Since the p -value is greater than .05, we can say that population mean is to equal sample mean, hence the research hypothesis is rejected. It means that West Bengal’s medical Doctors do not have a high level of stress. They have a medium level of stress. This finding do not support Jens Klein et.al.’s (2011) result, who noted that clinicians had high levels of job stress and this could be account for physicians’ and patients’ health. Health care professionals compare to other professional possessed higher levels of pressure within their workplace (Rees, D. W. and Cooper, (1992). Hassan Danial Aslam et.al. also reported a high level of stress among private and public hospital’s doctors in Pakistan. Hussain and Singh (2002) noted that gynaecologists and surgeons had significantly higher perceived stress than

the Ophthalmologists. The findings of Ramirez et al (1996) support this view. Saini NK et.al (2010) and Aarti G Sahasrabudhe et.al (2015) in their study on resident doctors observed high- stress level among them.

Data on occupational stress across gender indicates that female have a higher mean score (41) than male (38.24) but this difference statically not significant $F(1)=1.48, p=.227$ (table-4). This finding is consistent with the result of Zeynep Kalyoncu et.al (2012) and the study of Hirak Dasgupta and Suresh Kumar (2009) also found that there was no difference between the stress levels among male and female doctors. The finding is contradict the result of Abbas Sadeghi1 et.al. (2016) and Irfana Baba (2012), based on their descriptive statistics result they found that compared to female teacher male teacher had higher job stress. Rahsmi Gupta and Dr. Vilas Chopde (2011) observed significant positive relationships between respondents gender and work stress.

Table -4 Stress by demographic variables using analysis of variance

Variables	Mean	SD	F	P value
Gender :				
Male	38.24	7.95	1.480	.227
Female	41	10.16		
Age:				
25-30	38.17	6.94	1.696	.173
31-40	39.52	7.19		
41-50	41.80	12.38		
>50	33.33	11.50		
Education:				
Graduate	37.83	17.19	728	.396
Post Graduate	39.26	9.06		
Experience:				
1-3	38.85	6.73	.254	.858
4-7	39.28	8.11		
8-11	36.25	8.43		
>11	38.68	12.69		

Source: Compiled from survey data

Result of ANOVA analysis (table-4) of occupational stress based on age shows that $F(3,99)=.696$ and $P=.173$.As the p - value is greater than .05, it means that there is no significant difference between this two variables, $F(3,99)=1.696$ and $P=.173$. This finding do not support the result of Dragana Milutinovic et.al (2012) and Zeynep Kalyoncu, et.al. (2012) who found significant differences between occupational stress and age range, they found that compare to older people younger people had high stress level.

Result of ANOVA analysis (table-4) of occupational stress on educational qualification $\{F(2,101)=.728, p=.396\}$ and experience $\{F(3,99)=.254, p=.858\}$ reveal that there is no significant difference between these variables because the significant value is greater than .05. The present study does not support the result of Zeynep Kalyoncu, et.al. (2012) that education significantly affects the perception of stress.

A British Medical Association (BMA) report (2000) suggested that many senior doctors suffer high levels of stress as a result of their work which directly hampers their ability to provide high- quality care to patients. Spurgeon et. al (2005) in a study on stress among GPs found that older medical practitioners were more stressed by the new contract demands in comparison to younger doctors, but younger doctors were more stressed by unrealistic patient demands.

In the present study the null hypothesis two is rejected , the non-significant differences in the demographic variables (Gender, age, educational qualification and experience in service) observed, it is possibly due to the score of stress. If the item of stress may differ it may be possible that some significant result may get. The small sample size may also be reason for the non-significance of the variance .

HYPOTHESIS 3:

There is a significant relationship between factors of stress and stressors.

Table -5 depicts the result of descriptive statistics of Srivastava’s occupational scale. The five factors of stress on which doctors have high mean scores are Workload, peer-relation, time, work-overload and work life balance. According to the response of respondents’ calculated mean is used to rank the factors of stress. The table also reveals that 37% of respondents have high stress on workload, peer- relation is the factor of high stress for

30% doctors; 25% doctors reported that time management causes them high stress. Only 25% respondent informed that they were stressed in explaining responsibilities to a new employee.

To test the relation between stress and stressors Pearson correlation has been used. The results in table -6 shows that all the thirteen factors of occupational stress are positively and significantly related with total scores of stress .The strengths of the correlation are between $r = .262$ to $r = .661$. In behavioral sciences correlation coefficients of $r = .10$, $r = .30$ and $r = .50$ are considered as small, medium and large coefficients respectively [Cohen (1988) Gravetter and Forzano (2009) and Green and Salkind (2003) in Kathungu Beatrice Mwathi (2010)]. All the factors (except four factors,) of stress are highly related with stress . Since the alpha values are less than .01 we can accept null hypothesis and reject alternative hypothesis. We conclude that our experiment provides evidence that all the factors of stress/stressors are positively related to stress. The strength of association indicates that all these thirteen factors have medium to high impact on occupational stress.

The present study finds that workload, peer-relation, time, work-overload and work life balance are the five sources of stress on which medical doctors have high stress. This result is in line with many previous researchers’ findings (such as Burbeck et. al 2002, Schattner et. al 1998) Research studies stated that there are many causes correlated with occupational stress of doctors/general practitioners.

Table -5 Descriptive statistics of Stressors

Stressor	MEAN	SD	RANK	Response as high
I am delegated some extra responsibilities in addition to my prescribed ones	4.0196	.96452	1	37%
I get irritated in explaining to new personnel about their work and responsibilities	2.1765	1.08465	12	2%
I feel that I am not fully capable and competent to bear out my job responsibilities effectively.	1.9706	1.12096	13	4%
I have to give extra time due to excessive work load	3.5980	1.11923	3	25%
I am to do some such tasks as ought to be done by others	3.3431	1.03880	4	12%
It becomes very difficult for me satisfy everyone in distribution of work and responsibilities	3.7059	1.11327	2	30%
It becomes difficult and dubious for me to take decision in crucial matters pertaining to subordinates’ service	3.0490	1.06592	6	8%
A big burden of supervision and control of a number of employees is on me	2.5196	1.6662	10	7%
I have to be ultimately responsible for the performance of a number of employees.	2.8687	1.34267	8	15%
I have given major responsibility of formulation and/or implementation of important policies.	2.8431	1.34050	9	14%
Having excessive job responsibilities, I find it difficult to give sufficient time to my family and friend circle.	3.1078	1.42750	5	24%
I have to take crucial decisions in the matter of employees’ grievances, transfers and/or promotions.	2.4706	1.39806	11	10%
I am given responsibilities of solving crucial/emergent problems of the department/ organization	3.0098	1.27811	7	14%

Sources: Compiled from Survey data

Table-6 Pearson correlation coefficient between Stress and Components of stress

Components of Stress	Pearson correlation coefficient	P value	Interference level
I am delegated some extra responsibilities in addition to my prescribed ones	.419	.000	Moderate
I get irritated in explaining to new personnel about their work and responsibilities	.261	.000	Moderate
I feel that I am not fully capable and competent to bear out my job responsibilities effectively.	.412	.000	Moderate
I have to give extra time due to excessive work load	.537	.000	Strong
I am to do some such tasks as ought to be done by others	.522	.000	Strong
It becomes very difficult for me satisfy everyone in distribution of work and responsibilities	.420	.000	Moderate
It becomes difficult and dubious for me to take decision in crucial matters pertaining to subordinates' service	.524	.000	Strong
A big burden of supervision and control of a number of employees is on me	.609	.000	Strong
I have to be ultimately responsible for the performance of a number of employees.	.624	.000	Strong
I have given major responsibility of formulation and/or implementation of important policies.	.661	.000	Strong
Having excessive job responsibilities, I find it difficult to give sufficient time to my family and friend circle.	.661	.000	Strong
I have to take crucial decisions in the matter of employees' grievances, transfers and/or promotions.	.650	.000	Strong
I am given responsibilities of solving crucial/emergent problems of the department/ organization	.576	.000	Strong

Source: Compiled from survey data; Correlation is at the significantt .01 level (2 tailed)

CONCLUSION:

Stress especially occupational stress in modern life is a fact of concern .Due to the complexity of the nature of work employees have to play multi- facet role which, leads to increases stress among them. In health care delivery system mental and physical effort of employees are required to run the health care institution. The present study seeks to explore the stress level of doctors of West Bengal and to examine the relationship between stress and demographic variables. The entire hypothesis formulated in the study to test is rejected except hypothesis three. West Bengal doctors have a medium level of stress. According to the response of doctors Workload, peer-relation, time, work-overload and work life balance are the five factors on which they have a high level of stress. The knowledge of stress level helps the doctors and authority to take stress management strategies to reduce stress/to manage stress level. Every health institution should do stress audit to plan the stress coping strategy because patients' lives depends on doctor's service , if he/she is stressed and depressed than patients life suffer.

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An analysis of the relationship between personality types and happiness of medical faculty

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Abstract

In order to develop quality healthcare professionals it is essential to know the factors that affect their workplace happiness. This study dwells into the personality types of healthcare professionals in order to investigate whether the personality types of healthcare professional affect their workplace happiness and if so how it is affected. The study used a version of the Myers Briggs type indicator and the Job Central Happiness Indicator to ascertain personality types and the happiness levels of the respondents. The study was conducted among a random sample of 102 doctors (N=102) from North Bengal Medical College, Siliguri. The study showed that personality type has no significant influence on workplace happiness.

Keywords: Healthcare, Workplace, Happiness, Quality and Personality Types.

Introduction

Happiness is an important topic in organizational research because of its many effects on the success of the organization and some organizations strive to maximize organizational happiness. Happy employees create a more positive working environment for organizations. Personality has been considered as one of the factor that act as sources of workplace happiness.

The influence of personality on employee's behavior can be traced back to the Hawthorne Studies. It is a good predictor of behaviors, which are not possible to envisage using the general mental abilities, knowledge, skills and concrete situations (Barrick & Mount, 2005; Ones, Viswesvaran & Dilchert, 2005 in S Ovidiu). Individual's behavior is determined by his personality characteristics and situational factors, which are changeable during the time. In order to exchange and predict work behavior, knowledge about an individual's personality characteristics and his surroundings is required (K.S. Cook et.al., 1983).

During the past decade the topological approach to ascertaining personality influences has produced a large number of studies based on Jungian personality types. Dr. Carl G. Jung was a Swiss physician-psychiatrist who developed a comprehensive theory to explain personality. Myers (1976) explained that the central tenet of Jung's theory was that what appears to be random human behavior is actually quite orderly and occurs in patterns.

There is a need in medical education to understand the factors involved in professional happiness. A review of the literature revealed that no study had utilized Myers - Brigg's Type Indicator temperaments in attempting to explain individual teacher differences as they relate to job satisfaction variables. This study attempts to do just that.

A study of related literature

Various studies have examined the relation of personality traits to happiness and have yielded consistent findings. Extraversion and Neuroticism have been repeatedly found to be the strongest predictors of happiness levels, accounting for up to half of the total variance in various measures (Argyle & Lu, 1990; Brebner, 1998; Francis, 1999; al., 1998; Myers & Diener, 1995).

Mansoor Momeni et.al.(2011) studied the relationship between personality variables and happiness among the students of University of Tehran (UT). Their findings show that extraversion, agreeableness and conscientiousness impacts positively on happiness, While Neuroticism and openness impacts negatively on happiness.

Eysenck (1983) noted that "Happiness is a thing called stable extraversion...the positive effect in happiness seemed to be related to easy sociability; with a natural, pleasant interaction with other people...then it only makes sense that happiness can be associated with extraversion. Similarly, if worries and anxieties make up negative effect in happiness, it can easily be seen that instability and neuroticism are also connected to unhappiness".

Kenneth O. Doyle and Seounmi Youn (2000) found that Extraverts were happier than Introverts, and Tender minders were happier than Tough minders. They identified patterns of similarities and differences across personality types in the meaning of happiness with respect to good eating habits, financial insecurity, anxiety and tension, financial optimism, and health concerns.

Greg Huszczo, Megan Endres (2013) used MBTI to investigate effects of gender and personality on choice of happiness strategies and found that Females with "Feeling" preferences expressing significantly higher

use of happiness strategies than Males with “Thinking” preferences. Females with “Thinking” preferences and Males with “Feeling” preferences showed few significant differences from other types.

Very little number of studies has been found to establish relation between personality type and happiness. In this direction the present study may contribute some knowledge in happiness and personality research

Significance of the study

In this study an attempt was made to identify personality types of medical faculties and to relate these to work place happiness. Different types of people have demonstrated preferences for different ways of thinking and looking at their experiences, which were manifested in different behavior patterns. Different occupations and jobs provided various settings in which certain types of people felt comfortable and were happy. By identifying personality types of medical educators professional knowledge was gathered about the types of people who selected that occupation.

There was little or no research done on medical faculty and within the academic context. The present study is an in depth exploration of the relationship between personality and happiness will definitely help to find ways and means to meet challenges that require a new understanding in the faculty attraction, selection and retention space. This study attempts to add to the dynamics of personality and happiness in health institutes in India.

Objectives of the study

There were two primary objectives that the study sought to fulfill. The primary objective of the study was to find out the relationship between the personalities types as indicated by the Myers-Briggs Type Indicators (MBTI) and happiness at work. The secondary objective was to find out personality profile of medical teachers.

Methodology

The study sought to test the following hypotheses:-

Hypotheses:

H₀: There is no significant relationship between personality type and workplace happiness.

H₁: There is a significant relationship between personality type and workplace happiness.

The study was descriptive research study with no intervention by the researchers. 120 faculty members with at least one year of teaching experience from West Bengal were asked to fill in the questionnaires. The questionnaire was administered to 120 faculty members chosen randomly. The number of people who returned the questionnaire was 102.

Two instruments were used to collect data for this study. One was Job central Happiness Indicator and the other related to Personality characteristics based on the

Myers-Briggs Type Indicator (MBTI) in a revised form to suit the objective of the study.

The Myers Briggs type indicator: The MBTI is a self-report questionnaire based on Carl Jung's theory of psychological types. There are eight personality preferences which are paired along four bi-polar scales. There is no right or wrong responses and all eight preferences are equally valid. Irrational mental functions, Sensing (S) or Intuition (N), relate to how an individual perceives information, while rational mental functions, Thinking (T) or Feeling (F), provide insight into how one makes judgments or decisions based upon their perceptions. A Sensing person prefers to gather facts and information's by using one or more of five concrete senses, where as Intuition types look for meaning or relationships in their observations. Thinking individuals are inclined to make judgments and decisions based on logic and objective data and Feeling types prefer to make a judgment based more on their personal values and subjective data. The two opposite pairs of mental attitudes, Extraversion (E) or Introversion (I) and Judging (J) or Perceiving (P), represent how individuals prefer to orient or direct their time and energy and how one deal with the world around them, respectively. Personality results from a preference for and an interaction of these attitudes and functions. The four dimensions can be combined to identify sixteen personality types designated by 4 letters representing each of the preferred mental attitudes and function (e.g. ESTJ, INFP etc). No one personality type is regarded as superior in any way, but certain types are anticipated to be more naturally skilled or comfortable in certain contexts or roles (Stephen A. Jessee et. al., 2006).

Jobs central works happiness indicator is tool used to study how happy workers are with their jobs. It has been widely used in Singapore where online participation is voluntary and open to all Singapore workers above the age of 16. It is widely recognized as a comprehensive tool to ascertain workplace happiness.

Results and Discussion

Table 1 shows the percentage distribution of personality type and personality traits of all 102, medical faculty doctors. The doctors had predominant traits of Extraversion (E), sensing (S), feeling (F) and perceptive (P). Most doctors had a preference for Extraversion(57%) rather than Introversion(43%), Sensing perception(53%) rather than Intuitive perception(47%), Feeling judgment(62%) rather than Thinking judgment (38%) and a Perceiving orientation(59%) rather than Judging orientation(41%). Thinking was the weakest trait of the doctors only 38% demonstrated such a style. It could be reasoned that 'feeling' is required to realize patient's problems, which is why doctors are naturally high in it. Extraversion is necessary to interact and communicate with patient and

other parties, while 'sensing' helps to collect factual information rather than relying on intuition. Finally, being perceptive helps them to keep their opinion open for new information. As a group doctors displayed E-S-F-P traits.

As it is evident from Table 1 INFP had the maximum representation at 16% followed by personality type ESTJ at 15%, the personality ENFP 10% and ESFP and ISFP both type 9%. If we carefully look at the type preferences we will find that NFP (26/102) were

having a dominant preference over SFP (18/102).The personality type INFJ,INTJ and ENTJ found minimum representation at 2.5% and 2%. In this study INFJ, INTJ and ENTJ were minorities, which is not astounding given in small sample. These personalities carry important qualities such as originality, interest in discovering causes, ability to solve problems in more concrete fashion and to think about problem critically found least among the doctors.

Table 1: Myers-Briggs Type Indicator Doctor Type and Traits (N=102)

Sensin Type		Intuitive Types		Trait	
Thinking	Feeling	Feeling	Thinking		
ISTJ	ISFJ	INFJ	INTJ	Judging Introverts	Extroversion 57%
%=3	%=3.5	%=2.5	%=2.5		Introversion 43%
ISTP	ISFP	INFP	INTP	Perceiving Introverts	Sensing 53%
%=3.5	%=9	%=16	%=3.0		Intuition 47%
ESTP	ESFP	ENFP	ENTP	Perceiving Extroverts	Thinking 38%
%=3.0	%=9	%=10	%=6		Feeling 62%
ESTJ	ESFJ	ENFJ	ENTJ	Judging Extroverts	Judging 41%
%=15	%=7	%=5.0	%=2.0		Perceiving 59%

Approximately 84% of the respondents were male and 16% were female. In this survey dominant personality type of female were ENFP (3/16) followed by INFP (2/16).No female were found with ENTJ, ESTP, ESFJ, ISTP and ISTJ type. Female doctors displayed E-N-F-P traits, 50% of the female doctors were introverted, and 56% intuitive and 75% were both feller and perceiver. In case of female thinking was also weakest trait. Only 25% of female doctors had such style. This result coincide with other studies that female are feelers, intuitive and perceivers. According to Myers & McCauley's (1985) Manual, A guide to the development and use of the myers-briggs type indicator, 68% of females prefer the feeling function as a means of decision making. In the process of making decisions Feeling types will select for harmony within the group first and foremost. They are often deemed to have a passionate quest for meaning that appreciates human qualities with warmth (Berens, Cooper, Linda, & Martin, 2002).

Table 2: Personality and Happiness (frequency distribution)

Type/Happy	Very unhappy	Unhappy	Moderately happy	Happy	Very happy	Total
ENTP	1	1	1	3	0	6
ENTJ	0	0	2	0	0	2
ENFP	1	0	1	7	1	10
ENFJ	1	0	2	2	0	5
ESTP	0	0	1	2	0	3
ESTJ	0	2	7	5	1	15
ESFJ	1	2	0	3	1	7
ESFP	0	0	3	4	2	9
INTP	1	0	1	1	0	3
INTJ	0	1	1	0	1	3
INTP	1	0	2	0	0	3
INFP	0	2	6	7	1	16
ISTP	0	1	1	2	0	4
ISTJ	0	0	1	1	1	3
ISFP	1	0	4	4	0	9
ISFJ	1	1	0	1	1	4

Total	08	10	33	41	10	102
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Table 2 shows ESFP type represent maximum (2%) number of very happy doctors, but INFP (16%) personality type had highest representation. Hammer (in Leonie Tickle,2009) found that a number of studies suggested that those types who were less frequent or underrepresented in an occupation tend to be less satisfied or had higher intention to leave the occupation that did those types who were more frequent or whose fit with the occupation was judged to be better. This statement is not fully true in this survey, ESFP represent maximum number of very happy doctors compare to INFP. There was no ESFP type of faculties in very unhappy group. Only 9% faculty doctors had ESFP type personality. This type is attracted to business and medicine (Myers, 1962). In this study ESFP displaced respondents' group traits. These types of people are outgoing, friendly, and accepting. ESF personality type enjoys working with others to make things happen. Bring common sense and a realistic approach to their work, and make work fun. They are also flexible and spontaneous, adapt readily to new people and environments. Learn best by trying a new skill with other people.

No ENTJ, ESTP and ISTP personality type of doctors were either very happy or very unhappy. ISFJ, ESFJ and ENFP personality type had same (1%) percent in both group. No ENTP, ENFJ, INTP, and ISFP type of respondents were very happy but 1% each of this type was very unhappy. In this survey it was found that no ESTJ, ESFP, INTJ, INFP, ISTP and ISTJ personality type of doctors were very unhappy. ENFP (7), INFP (7), ESTJ (5), ESFP (4), ISFP(4), ENTP(3) and ESFJ(3) type of doctors were moderately happy they lack enthusiasm.

Analysis of data in this study failed to show relationships between MBTI personality types of medical faculty and their happiness at work. ISFJ, ESFJ and ENFP types were both in very happy and very unhappy group. Hypothesis that personality type has no significant influence on workplace happiness is accepted. There were no differences in type preference between faculties who were very happy or very unhappy at work; nor was it possible to predict happiness from MBTI preference scores.

Conclusions and Summary

Medical faculties play an important contributor role in shaping a future doctors intellect and hence happiness at work assumes great important in this context. Health care institutions need to consciously measure personality of faculty in recruiting, retaining and developing them. The present study found that personality type of faculties had no relation with work place happiness. While this study provided new data on the personality characteristics of medical faculty, it did not provide prediction capabilities that would aid recruitment of potential medical educator.

Based on the results from this investigation, the following recommendations are made.

1. Administrators need an understanding of all types of teachers. The application of personality type theory could assist administrators in better understanding and reinforcing all teachers, and in appreciating their unique teaching styles.
2. Administrators should seek strategies that will assist unhappy faculties to cope with areas of their job they dislike or to alter circumstances that are in conflict with their preferences. In this way, unhappiness may be lessened and good teachers may be retained.
3. An understanding of personality type theory would allow teachers to improve their interactions with students.

It is hoped that the findings of this study will assist administrators in the implementation of programs to monitor the workplace happiness of the medical faculty in an effort to improve the services provided to students and patients as well as increasing retention. This study demonstrated an empirical connection between personality type and workplace happiness in a sample of medical teachers, future work will pick up where the study left off and develop a more refined and nuanced understanding of how personality type affects a variety of job performance characteristics.

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INDIVIDUAL DIFFERENCES IN MEDICAL FACULTIES: A PSYCHOMETRIC ANALYSIS

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Abstract

This paper systematically investigates individual differences in personality characteristics of medical faculties and also evaluates their multiple intelligence areas. A sample of 102 medical teachers was screened with tests on personality type and multiple intelligences variables. The resultant Data was analyzed on various statistical parameters. Results showed that there were significant differences among faculties in personality and intelligence profiles. The implications of these findings are discussed for educationists and subject experts with respect to course content, delivery and counseling of students.

Keywords: Medical Faculties, Personality, Multiple, Intelligence, Individual and Characteristics.

Introduction

The study of individual differences examines how people are alike and how they are different in their thinking, feeling, and behavior. The two most popular individual differences that psychologists study are general intelligence and personality characteristics. General intelligence and personality are also classified as traits, or lasting dispositions to act in similar ways across situations, and have been allied to several organizational and individual outcomes, such as job performance, job satisfaction, career success, leadership, career prospective, and acquirement of job related knowledge .

In recent years; the measurement in the domain of individual differences necessitates incorporation of multiple areas to assess (Kazdin.A.E.). Researchers tend to focus on only one set of constructs at a time when studying individual differences across domains, such as interest, personality, intelligence or values; they have also realized that a more powerful understanding of how individuals adjust to their environments will materialize when multiple areas are assessed simultaneously. This article measures personality type by the Myers Briggs Type Indicator and eight domains of multiple intelligences of Howard Gardener's model that are component of this rising issue of individual differences.

Study of Related Literature

An individual's personality is a sort of stable precursor of behavior; it underlines an enduring mode of thinking, feeling and acting (Costa, &

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McCrae, 1992). Personality is a unique characteristic of an individual (Rusting & DeHart, 2000; Furham 1999 in Dr Sandhya Mehta). Fairhurst (1995 in Mohamad Jafre Zainol Abidin et.al.2011) reported that knowledge of teachers' temperament and personality is very helpful to recognize the difference between their personality types and students learning style. American researchers (Barrett, 1991; Kent and Fischer, 1997; Spragne, 1997 in Stephen Rushton et.al., 2007) investigated teacher personality, characteristic using MBTI. They studied the significance of teaching style of teachers on student learning (Fairhurst & Fairhurst, 1995; Pankratius, 1997 in Stephen Rushton et.al., 2007). The ISFJ profile incorporated the largest percentage of the 16 types. There have been a range of studies to classify personality characteristics linked to occupation associated outcomes (Barrick, Mitchel & Stewart, 2001; Borgen, 1999; Borman, Hanson & Hedge, 1997; Hogan & Blake 1996; Hogan & Holland, 2003; Johnson, N & Holdaway 1994 in Dr Sandhya Mehta). Zimmerman et al. (2006) investigated differences in learning styles and personality types among engineering students, agricultural systems management students, and faculty in the Department of Agricultural and Biological Engineering. There were no significant differences in MBTI type preferences between engineering students and faculty. However, the agricultural systems management students differed significantly ($p < 0.05$) from faculty in their preference for Perceiving and from engineering students in their preference for Sensing. Some studies showed that usually elementary school teacher had a inclination toward the personality style of sensing feeling and judging (Reid, 1999). Dr Sandhya Mehta (2012) reported that teachers were more ESTJ (extrovert, sensing, thinking and judging), ISTJ (introvert sensing, thinking and judging) and ESFJ (extrovert, sensing, feeling and judging) type.

To common men the word intelligence means the idea of IQ testing. Intelligence is frequently referred as our intellectual potential; something we are born with, something that can be calculated and a capacity that is complicated to change. In present years, though, other thoughts of intelligence have emerged. One such conception is the theory of multiple intelligences which viewed intelligence as the bio-psychological potential to process information in certain ways, in order to explain problems or fashion products that are esteemed in a culture or community (Christodoulou). The Theory of Multiple Intelligences states that individual differs in their intelligence profile. This concept has been mostly used in research of education sector to identify learning and teaching style. Very few studies have been utilized the concept of Multiple Intelligences in Organizational Behavior research. Brian J. Hoffman and Brian C. Frost (2006) investigated the influence of emotional, social, and cognitive intelligences on the dimensions of transformational leadership. Findings of the research revealed that to predict transformational leadership multiple intelligences framework is a useful tool.

Narges et. al. (2010) examined the effect of Multiple Intelligences (MI) on organizational effectiveness. Their finding stated that a manager with high emotional intelligence could cope well with the market and managed situations better than the others. Survey results of Qader et. al. (2011) showed that there was a positive correlation relationship between multiple intelligences and productivity. Findings of Dr. R. Senathiraja et.al. (2013) revealed that IT professionals had a high level of mathematical, spatial, interpersonal & naturalistic

intelligence. There was a relationship between multiple intelligences and team development, which proved that intelligence levels of IT employees played a critical part in their day to day work. The study provides valuable insights into the notions, intelligences and team performances which are highly involved among the software companies.

To occupation related outcomes many research have been conducted to categorize personality characteristics and intelligence. The aim of the present paper is to examine the individual differences of medical faculties of west Bengal; in relation to two psychometric test. One is the Myer's -Briggs Type Indicator (MBTI) and the other one is Howard Gardener's multiple intelligences. In Indian setting there is lack of such research; the present research will try to fill that gap.

Objectives of the Study

The study has two pronged objectives which are to find out individual differences in personality profile of medical faculties and to evaluate the multiple intelligence areas of medical faculty.

Significance of the study

In the teaching profession to teach successfully the knowledge of individual differences is useful which helps to get an idea about human behavior, ability and interest .In this regard identification of Personality type and multiple intelligences domains of teacher certainly help us. Knowledge regarding this two psychometric strength personality and intelligence, help in better understanding of student related problems. The teachers are the role models for the students. Personality and intelligence of the teacher in general influenced the classroom value. The ruthless and insensitive teacher creates a lethal classroom environment with lack of enthusiasm and underachievers. In contrast cheerful and receptive teacher builds positive teaching environment which assist students to countenance toughest problems in life (Greg Stefanich,2007).

Methodology

The study was a descriptive research study. To collect quantitative data for this study a survey was conducted with the help of two standardized tools. One was relating to Personality characteristics by the Myers-Briggs Type Indicator (MBTI), revised form to suit the objective of the study and the other one was Howard Gardener's Multiple Intelligences Test (MI).

The MBTI was developed by Katherine Cook Briggs and Isabel Briggs on the basis of Carl Jung's theory of psychological types; is a self-report questionnaire .There are four bi-polar scales with eight personality preferences. There is no right or wrong responses and all eight preferences are equally applicable. Irrational psychological functions, Sensing (S) or Intuition (N), relay to how a person perceives information, while rational mental functions, Thinking (T) or Feeling (F), provide insight into how one makes judgments or decisions based upon their perceptions (SHI RU et..al.,2007). A Sensing person prefers to gather facts and informations by using one or more of five concrete senses, where as Intuition types look for meaning or relationships in their observations. Thinking

individuals are inclined to make judgments and decisions based on logic and objective data and Feeling types prefer to make a judgment based more on their personal values and subjective data. The two opposite pairs of mental attitudes, Extraversion (E) or Introversion (I) and Judging (J) or Perceiving (P), represent how individuals prefer to orient or direct their time and energy and how one deal with the world around them, respectively. Personality results from a preference for and an interaction of these attitudes and functions. The four dimensions can be combined to identify sixteen personality types designated by 4 letters representing each of the preferred mental attitudes and function (eg. ESTJ, INFP etc). No one type of personality is considered as superior in any way, but in certain contexts or roles certain personality types are anticipated to be more naturally skilled or comfortable . (Stephen A Jessee, 2006).

Multiple intelligences survey is used to identify eight multiple intelligence abilities as defined by Gardner (2006), namely verbal-linguistic, logical-mathematical, visual-spatial, musical-rhythmic, interpersonal, intrapersonal, bodily-kinesthetic, and naturalistic.

Data Analysis and Results

The participants were 102 medical faculties. They were selected randomly from public medical college from west Bengal. They included 86 males and 16 females, the majority being young, under 40 (n=68). 18.63% had working experience of more than eleven years in college (n=19), while 81.37% (n=83) had less than 15 years of experience. More than half had a post graduation degree (n=60), while 42 had a bachelor degrees.

Table-1 shows the percentage distribution of personality type and personality traits of all 102, medical faculty doctors. The doctors had predominant traits of Extraversion (E), sensing (S), feeling (F) and perceptive (P). Most doctors had a preference for Extraversion(57%) rather than Introversion(43%), Sensing perception(53%) rather than Intuitive perception(47%),Feeling judgment(62%) rather than Thinking judgment (38%) and a Perceiving orientation(59%) rather than Judging orientation(41%). Thinking was the weakest trait of the doctors only 38% demonstrated such a style. It could be reasoned that 'feeling' is required to realize patient's problems, which is why doctors are naturally high in it. Extraversion is necessary to interact and communicate with patient and other parties, while 'sensing' helps to collect factual information rather than relying on intuition. Finally, being perceptive helps them to keep their opinion open for new information. As a group doctors displayed E-S-F-P traits.

As it is evident from table-1 INFP had the maximum representation at 16% followed by personality type ESTJ at 15%, the personality ENFP 10% and ESFP and ISFP both type 9%. If we carefully look at the type preferences we will find that NFP (26/102) were having a dominant preference over SFP (18/102).The personality type INFJ,INTJ and ENTJ found minimum representation at 2.5% and 2% .In this study INFJ, INTJ and ENTJ were minorities, which is not astounding given in small sample. These personalities carry important qualities such as originality, interest in discovering causes, ability to solve problems in more concrete fashion and to think about problem critically found least among the doctors.

Table-1 Myers-Briggs Type Indicator Doctor type and Traits (N=102)

SENSIN TYPE		INTUITIVE TYPES		TRAITS	
Thinking	Feeling	Feeling	Thinking		
ISTJ	ISFJ	INFJ	INTJ	JUDGING INTROVERTS	Extroversion 57%
%=3	%=3.5	%=2.5	%=2.5		Introversion 43%
ISTP	ISFP	INFP	INTP	PERCEIVING INTROVERTS	Sensing 53%
%=3.5	%=9	%=16	%=3.0		Intuition 47%
ESTP	ESFP	ENFP	ENTP	PERCEIVING EXTRAVERTS	Thinking 38%
%=3.0	%=9	%=10	%=6		Feeling 62%
ESTJ	ESFJ	ENFJ	ENTJ	JUDGING EXTRAVERTS	Judging 41%
%=15	%=7	%=5.0	%=2.0		Perceiving 59%

Approximately 84% of the respondents were male and 16% were female. In this survey dominant personality type of female were ENFP (3/16) followed by INFP (2/16). No female were found with ENTJ, ESTP, ESFJ, ISTP and ISTJ type. Female doctors displayed E-N-F-P traits, 50% of the female doctors were introverted, and 56% intuitive and 75% were both feller and perceiver. In case of female thinking was also weakest trait. Only 25% of female doctors had such style. This result coincide with other studies that female are feelers, intuitive and perceivers. According to Myers and McCaulley's (1985) Manual, A Guide to the Development and Use of the Myers-Briggs Type Indicator, 68% of females prefer the Feeling function as a means of decision making. In the process of making decisions Feeling types will select for harmony within the group first and foremost. They are often deemed to have a passionate quest for meaning that appreciates human qualities with warmth (Berens, Cooper, Linda, & Martin, 2002). From table one it is clear that there is individual differences of personality characteristic of medical faculties.

Descriptive statistical data on the multiple intelligence domains of doctors.

Statistic	Verbal/linguistic	Logical/Mathematical	Visual/Spatial	Musical/rhythmic	Bodily/kinesthetic	Interpersonal	Intrapersonal	Naturalistic
MEAN	20.96	26.15	22.04	20.60	21.23	24.68	22.37	20.35
SD	5.615	6.673	6.617	6.306	8.09	6.392	5.617	6.987
MAXIMUM	39	40	36	40	40	39	37	39
MINIMUM	8	10	7	5	5	6	9	2
LEVEL	MODERATELY ADVANCED	ADVANCED	MODERATELY ADVANCED	MODERATELY ADVANCED	MODERATELY ADVANCED	ADVANCED	MODERATELY ADVANCED	MODERATELY ADVANCED

The data about the doctors multiple intelligence domains were obtained by using the mean, standard deviation, and minimum-maximum scores (Table 2). It was found that doctors had the highest mean score in logical-mathematical intelligence domain and the lowest mean score in naturalistic. The obtained mean scores suggest that they have advanced levels in logical mathematical and interpersonal intelligence domains and moderate advancement levels in verbal-linguistic, visual spatial, musical-rhythmic, bodily kinesthetic and intrapersonal intelligence domains.

Table -3 shows the distribution of intelligence domains according to advancement levels. For detailed examination frequency and percentage were computed for the advancement levels of each intelligence domain. As is clear from the table, there are doctors with all levels from "unadvanced" to "highly advanced" in spatial-visual, kinesthetic-bodily, musical-rhythmic, interpersonal, intrapersonal and naturalistic intelligence domains. In the remaining intelligence domains, on the other hand, medical professional have at least "slightly advanced" level and higher levels. The doctors with "highly advanced" levels do not have significant numbers in any intelligence domains. In the survey mathematical-logical have highest numbers following interpersonal intelligence domain.

Advancement levels of the doctors' multiple intelligence domains.

Multiple intelligence DOMAIN	Highly advanced		Advanced		Moderately advanced		Slightly advanced		Unadvanced	
	f	%	F	%	F	%	f	%	F	%
Verbal	2	1.97	37	36.27	47	46.07	16	15.69	nil	nil
Logical	22	21.57	47	46.07	24	23.53	9	8.83	nil	nil
Spatial	4	3.92	38	37.25	48	47.06	11	10.77	1	1
Kynesthetic	4	3.92	32	31.37	43	42.15	18	17.66	5	4.9
Rythmic	11	10.78	28	27.45	36	35.29	22	21.58	5	4.9
Interpersonal	12	11.76	41	40.19	41	40.19	7	6.86	1	1
Intrapersonal	5	4.9	40	39.21	46	45.09	10	9.80	1	1
Naturalistic	5	4.9	24	23.5	47	46.07	23	22.57	3	2.96

Table-3 also indicates that faculties are differing in multiple intelligences profile. The primary finding of the study was that medical professionals have Multiple Intelligences to some extent. According to table-3 mathematical – logical and Interpersonal were the dominant intelligence domains of doctors in the study. This finding is consistent with Gardner (1987) who stated that, intelligence is pluralistic and one could possess 2 – 3 or more of multiple intelligences (Dr. R. Senathiraja et.al. 2013). Yet, as argued by Gardner, this does not necessarily mean that these doctors lack or never use other intelligence domains, because the theory of multiple intelligences speaks not of a single intelligence, but of a combination of multiple intelligences. Gardner (1983) stated that human capacities, abilities, and preferences, and the use of these capacities, abilities, will vary within any work environment (Dr. R. Senathiraja et.al. 2013). Medical professional needs knowledge both practical and theoretical which is embedded in human beings. Doctors with mathematical-logical intelligence domain are scientific thinkers; they deal with logical-thinking and problem-solving (infed.org). Doctors having an advance level of logical-mathematical intelligence have developed the skills of analyzing, inducing, deducing, estimating, predicting, organizing, sequencing, questioning, and experimenting .Advance level in interpersonal domain helps medical professional to interact with patients. Their sensitivity to others need, empathetic and sympathetic characters are very helpful in success in this profession.

Doctors are moderate with remaining intelligence domains. In our country a person is considered intelligent if he is good in math or science and if he has dominant intelligence in aesthetic intelligences domain, he is considered as a different or educationally less intelligent individual. In our country medical profession is considered for intellectually bright students. This may be the reason doctors are advance in logical mathematical intelligence domain.

In Table-4 we see mathematical intelligence is prominent in all type of personality of medical faculties. INFP represent maximum percentage of personality type but no doctor has spatial and kinesthetic intelligences in this category. The personality type and intelligence domains are not related and multiple intelligences are not part of personality type. There do appear to be dramatic differences in the intelligence and personality profile of medical faculties. Individual differences in personality type and multiple intelligences make possible to know person's behavior and ability and It is necessary to appraise both personality (type) and multiple intelligences (ability) to fully depict and comprehend an individual's competence and potential (Wikipedia).

Table-4 Frequency Distribution of Personality and Multiple Intelligences Profile of Medical Faculties

Type/intelligence	Linguistic	Mathematical/Logical	Spatial	Kinesthetic	Rhythmic	Interpersonal	Intrapersonal	Naturalistic	Total
ENTP		1			2	2	1,(F)		06
ENTJ		2							02
ENFP		2		1	2(1F)	3(F)		2	10
ENFJ	2	2				1			05
ESTP		2					1		03
ESTJ	1	7(1F)	1			4	1	1	15
ESFJ		3	1		2(1F)	1,			07
ESFP	1(F)	3(1F)		2	1	2(1F)			09
INTP		2(1F)				1			03
INTJ		1	1			1(F)			03
INFJ		2(1F)			1				03
INFP	1	4(1F)			1(F)	4	2	4	16
ISTP	1	1		1			1		04
ISTJ		1			1	1			03
ISFP	1(F)	4	1		2,		1(F)		09
ISFJ	1	3(1F)							04
Total	8	40	4	4	12	20	7	7	102

*F = female

Summary and Conclusion

Medical faculties play an important contributor role in shaping future doctors. Health care institutions need to consciously measure differences in personality of faculty in recruiting, retaining and developing them. This study provided new data on the personality characteristics of medical faculty.

The results of the study clearly indicate individual differences among the doctors in the multiple intelligence domains. In the light of this fact, doctors should be provided with opportunities to discover their dominant intelligence domains.

Individuals with varied personality and multiple intelligences are valuable resources for organizations. Management of health institutions need to take necessary steps in the selection and recruitment process in order to recognize the different personality and intelligences of individuals.

Based on the results from this investigation, the following recommendations are made.

1. Administrators need an understanding of all types of teachers. The application of personality type theory could assist administrators in better understanding and reinforcing all teachers, and in appreciating their unique teaching styles (Capt.org).
2. An understanding of one's personality type would allow teachers to improve their interactions with students.

3. Identification and admiration of diverse skills, abilities and preferences will give confidence to individual to contribute to their maximum ability. As a result individuals' will be conscious of their own strengths - weaknesses and they will improve their strengths to attain desired results.
4. To select the best from the rest the requirement process has to be efficient. Administrators should consider personal and social skills in addition to educational qualifications.

The findings of this study have potential theoretical and practical implications for medical faculties concerning their personality and multiple intelligence abilities yet; the generality of the present study is limited by the small sample size. A larger sample size would be more reliable. These findings require further research. As specialists in the field of medicine increase, research might compare individual differences in personality characteristics and intelligences of specialists with generalist clinicians. Such investigations will enhance the understanding of the current and future professional membership at a critical time when roles of medical faculties in the health-care sector are flattering, multifaceted, diverse, and vibrant (Gulseren KESKÖN and Gul Ozlem YILDIRIM 2008).

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