**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.0 INTRODUCTION**

This chapter describes and explains the methodology deployed in this study and the research methods which informed my choice of methods. This research was conducted in order to critically examine work life balance and its effect on employee’s performance. The identification of various work life balance policies and programs vis-a-vis the challenges employees face in Barclays bank, Koforidua was also part of the objectives of this study.

In order to gather relevant data for the study, several research designs can be used. This chapter presents the research design, methods used to gather data. This chapter discusses the research design, population, sampling techniques, data collection tools and procedure.

**3.1 RESEARCH DESIGN**

The research design explains where the researcher intends to carry out the research in terms of which sector of the economy and why that choice. It gives an overall view the method chosen and the reason for that choice. It is believed that is prudent to know the method used because it affects the results.

Conceptually, the research design for this research is descriptive in nature based on a case study in the Barclays bank located in the New Juabeng Municipality, Koforidua. It is descriptive because it focuses on how and who in other words how it happened and those who were involved.

Questionnaires were distributed to solicit information from the respondents and then the data was statistically analyzed using statistical package for social science(SPSS). Tables, frequencies and percentages were also used in analyzing the data.

**3.2 STUDY SITE**

The research was carried out in Koforidua, the capital city of the Eastern Region of the Republic of Ghana. Koforidua shares boundaries withfive of the ten regions in Ghana which include Volta Region to the East, Ashanti Region to the West and the Central and Greater Accra Region to the South. Choosing Koforidua as the study site was because the researcher resides there and also the choice of company to be used as case study that is Barclays Bank Ghana Limited was situated there which could make the research very easier as compared to somewhere else.

**3.3 STUDY POPULATION**

Mugenda & Mugenda (2003) define population as a complete set of individuals, cases or objects with some common observable characteristics. Given this definition, the population for the proposed study comprises of seventy-five (75) management members and staff.

**3.4 SAMPLE SIZE**

The sample size for the present study was fifty (50) thus fifty (50) respondents out of seventy-five (75) employees in the study site was surveyed. Some of which include the branch manager, bank officer, administrator, tellers, field workers, personal bankers, accountants, mobile bankers and credit officers etc.

**3.5 SAMPLING TECHNIQUES**

Sampling technique is the process adopted in taking any position of the population or universe as a representative of that population of that universe(Twumasi 2006).

Probability sampling technique was deployed for this study. With this method the chance of selection for each element is unknown and for some element is zero(Earl, 2002). Non probability sampling techniques includes Quota Sampling, Purposive and Accidental Sampling etc.

In this study, purposive sampling technique was used to solicit for information. It is purposive because the researcher targeted respondents who had the needed information and are able to give it out.

**3.6 SOURCES OF DATA COLLECTION**

The data needed for a study can be collected either as secondary data or as primary data. Hussey et al. (1997), explain primary data to be data collected at source whereas secondary data is data which already exists.

Structured questionnaires was used in the primary data collection.The structured questionnaires was used to get the unbiased opinion of respondents. The data collection instrument made it very easy for respondents to give the information needed for the analysis.

Secondary data for this study are collected from literature (books, journals, articles, magazines, etc.), Internet, and databases.Books from libraries and on-line formed the substantial part of the literature review.

**3.7 METHOD OF DATA ANALYSIS**

The primary data collected was analyzed using Statistical Package for Social Science (SPSS) computer software. This generated the data in the form of tables and charts for easy interpretations.

**3.8 RESEARCH CONSTRAINTS**

Time was one of major limitations that confronted the researcher during this research work. It was not easy combining the semester’s academic work with the research work.

Another major limitation that confronted the researcher was finance. It was not easy raising funds as a student to help in printing of questionnaires and the entire research work.

An equally important constraint the researcher faced was uncooperative attitudes of the respondents. There were several instances that some interviewees gave excuses not having time for the scheduled interview, sometimes the interviewees are not available because of their busy schedules. It took a longer time to get a reasonable number of people to interview which was a big challenge and time consuming.

**1.4 Sample size**

The total number of 1000 students will be under studied. With 250 been engineering students pursing bachelor programs while 250 also are nursing students pursing health programs. While 250 students are Business Management, the remaining 250 are those students from IIT’s. The target population for this study will be the students pursing both the undergraduate and postgraduate programmes since they are normally put in teams to accomplish task.

Out of the 5806 students forming the size of the target population, will be drawn a sample to represent the entire population since it will be more tiresome and complex to work with the totality of the whole population.

**3.9ORGANIZATIONAL PROFILE**

**1.3 Profile of the Students from Different Disciplines (Engineering, Nursing, Business Management and IITians) understudy**

**Engineering students**

Engineers are expected to have a high degree of technical skills, but to be successful and competitive in a changing work environment they need more than technical expertise. A number of studies have recently identified the capabilities that are seen to be most important for engineers to be successful. Emotional intelligence is one of those capabilities high on importance for successful engineering practice. Emotional intelligence “was seen as being of major importance in 10 teamwork or in the management of a group of people” (Szkutnik, 2001). It is when the unexpected occurs, when a project does not pan out as expected, when things are not running routinely, that professional capability in engineering is most tested; and it is the combined effect of emotional intelligence, intellectual ability, and key skills like those identified as most important which makes the difference at these times. Goleman has asserted that emotional intelligence abilities were about four times more important than IQ in determining professional success and prestige, even for those with a scientific background (Goleman, 1998). One reason, underlying the critical role of EI in the success of engineers, is that EI is significantly related to cognitive capability, with markedly strong effects on high scholastic achievement. In terms of neurology，emotions contribute directly to rational thought; messages to an individual’s brain from the eyes and ears first go through the brain structure most heavily involved in emotional memory (Segal, 1997). Another reason, which might be the most important, is that communication, an important characteristic of the industry, can be augmented by the enhancement of certain EI elements (Riemer, 2001 and 2003). Those who are “emotionally illiterate” blunder their way through career, or even life, marked by misunderstanding; frustrations, and failed relationships.

**Nursing students**

In 2006, the National League of Nursing Accrediting Committee introduced a critical thinking learning outcome (evidenced by journaling and reflection) as a condition for nursing school accreditation.[[5](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123480/" \l "ref5)] This policy has remained unchanged and virtually unimproved on for several years. The literature review reveals the paucity of research and studies about EI and introducing it into nursing curricula in the USA. However, the literature review does reveal important initial steps in implementing EI and associated concepts into the nursing curricula and government policies of other nations.

One of the earliest proponents of introducing EI into nursing curricula were Akerjordet and Severinsson in 2004.[[21](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123480/#ref21)] However, despite stating a cautious optimism about the future of EI, by 2010 these authors question introducing EI into academic curricula and express doubts about the validity of EI constructs, tests, training, and a lack of rigor and control in EI studies. Akerjordet later devised an EI instrument specific to nursing, still under development at the time of this writing[[22](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123480/#ref22)]. Despite the misgivings of those early proponents, the literature presents successful studies of EI and its integration into academic curricula. EI is used to screen nursing applicants in the UK.[[23](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123480/#ref23)] EI helps UK nurses to deal with the stress associated with end-of-life care in the emergency department.[[24](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123480/#ref24)] In Singapore, nursing curriculum is aided in the design by determining the EI profiles and needs of their students.[[25](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123480/#ref25)] Graduate entry medical students take an 8 h course in personal and professional development and complete two EI testing procedures over a 2-year period in order to address the topic of professionalism, stress, stress management, and leadership.[[26](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123480/#ref26)]

Harrison and Fopma-Loy advocated reflective journaling should be used in many nursing courses including leadership and simulation.[[27](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123480/#ref27)] Humphrey et al. called for studies for the purpose of introducing EI into secondary and graduate school curricula.[[28](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123480/#ref28)] Hurley and Rankin advocated the use of experiential and cognitive learning as a direct means of introducing EI into an already crowded nursing curriculum.[[29](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123480/#ref29)] Hurley further argued that in the UK and Australia, the generic 3-year nursing program is inadequate for training mental health nurses and that new learning outcomes with EI at the core of nursing curricula is both needed and warranted.[[30](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123480/#ref30)] Both undergraduate and graduate business curricula benefit from EI for the teaching of effective collaboration, adaptability, and critical thinking.

**Business management students**

The importance of EI skills in the business workplace is highlighted by the very nature of the job. Business professionals work both by themselves and in teams. Personal EI skills of self-awareness, self-regulation and motivation (Goleman 1998b) are essential if individuals are to recognize their owns strengths and weaknesses, develop good self esteem, maintain integrity, demonstrate flexibility, take responsibility for their own actions, take initiative and strive for excellence. Interpersonal EI skills such as empathy and social ability are at the heart of handling relationships. They involve understanding the needs of others, implementing successful conflict management strategies, listening and leadership. Thus EI is an essential ingredient for a productive workplace (Smigla & Pastoria 2000). Furthermore, the importance of EI skills has been recognized by many professional associations and bodies working on different spheres of business. It has been asserted that although literature has given little attention to behavioral issues in the past, today ‘many organizations and researchers are recognizing that emotional intelligence skills are critical to success’ (Akers & Porter 2003, p. 66). Akers & Porter also reported that a Harvard Business School study of its graduates revealed there was little or no significant correlation between career success and IQ. This is consistent with the contention that measures such as IQ and grade point averages lack predictive ability, and that it is EI which provides the missing link between university results and career success (Chen, Jacobs & Spencer 1998; Goleman 1995, 1998b). But the recognition of the importance of EI has not been limited to the US. Writing in the UK publication Accountancy Age, Darling asserted that ‘it is necessary for accounting firms to ensure their staff are developed to become more emotionally intelligent’ which will ‘create a better working environment’ (Darling 2000, p. 24). Chia (2005) studied the recruitment process in UK firms and identified that the demonstration of EI competencies enhanced the graduate’s performance in the interview process. He suggested that ‘technical academic skills become less effective due to the speed of changes in the global business environment’ (Chia 2005, p. 87). Thus, published research advocates that recruiters are looking for EI skills and these competencies provide an excellent framework for assisting business graduates to find a job and succeed in the workplace. However, counselors working with undergraduates ‘usually focus on career management and job search skills and neglect the development of EI skills’ (Liptak 2005, p. 171). Similarly, the need for EI training as a part of university level education has been given only limited attention in recent calls for change to the business curricula, with the main focus being on content and delivery change (see for example, Albrecht & Sack 2000; Siegel & Sorensen 1994). Nevertheless, it is essential that universities produce graduates who have ‘the right mix of soft-skill competencies and knowledge needed to perform well in the changing economy’ (Chia 2005, p. 87). This recommendation is supported by Emmerling & Goleman (2005) who argued that although EI may be learnt to some extent through life experience, ‘without sustained effort and attention, people are unlikely to improve their emotional intelligence’ (Emmerling & Goleman 2005, p. 9).

**IITIANS**

Indian technical education system is one of the largest educational systems in the world. Quality technical education is key to increase India’s competitiveness in the global market. Technical education plays a vital role in human resource development of the country by creating skilled manpower, enhancing industrial productivity and improving the quality of life. It covers courses and programs in engineering, technology, management, architecture, town planning, pharmacy and applied arts and crafts, hotel management and catering technology. The technical education system in the country can be broadly classified into three categories like, Central Government, funded institutions, State Government/ State funded institutions and Self-financed institutions. In 2007-2008, there were 52 centrally funded institutions (CFI) of technical and science education. These institutions function following the guidelines stipulated by all India council for technical educational (AICTE) and the Council of architecture. As of now 2,300 engineering colleges are running in India and 600, 000 students are passing out in each year (6). In the list of CFI, the best technical institutes in India, the first that comes into mind is Indian Institute of Technology (IITs).

It was the N R Sarkar Committee report in 1946 on the post-war prospects for technical education that led to the founding of an innovative technological institute at Kharagpur. Some years later, it was raised to the level of an institute of technology (IIT). This coincided with Nehru’s vision of a future India in which science and technology would play a considerable role in development. From the day they were established, it was visualised that these institutes would compare with the best of their kind in the world. That the model taken was MIT at Boston did not inhibit other leading countries of the world from getting involved in their planning and establishment. These included the US, the USSR, West Germany and Britain. Each one contributed a great deal to their established and provided technical equipment and faculty in the initial stages. In course of time, each IIT established an independent personality of its own. In consequence, what was happening at American universities strongly influenced what was done at the IITs. IIT students (IITians) began to go to the US for further study; more important than that, a substantial number of them stayed on. Various surveys have been carried out, and over the years, the general trend was that about 30 per cent of them settled down in other countries. The 1986 review committee chose to play down the loss of talent to India when some of the best brains in the country decided to settle down abroad. While there are no firm data in regard to the pattern of employment from those who pass out from the IITs, the general trend may be described as follows. Something like 30 per cent of students migrated to other countries and another 15 per cent went into industry on their own, a somewhat larger proportion was employed by industry, a small proportion not even 5 per cent opted to go into teaching, the civil services, etc. and a substantial number, something like 25 per cent, opted for a career in business management. In fact, an IIT degree became the passport for entry into a business career. Over the years, this trend has become pronounced.

What proportion of Indian industry is controlled by IIT graduates is anyone’s guess. The best informed estimate is that it is the neighbourhood of 15 to 20 per cent.

Even though the IITs account for less than 2 per cent of the total number of engineering graduates at the degree level produced in the country, they occupy a unique position in so far as the IITs exert tremendous influence on the whole spectrum of technical education as also the entire range of the industrial sector.

Not only that, admission to the IITs was such that only the best talent in the country could get entry into them. It became the ambition of almost every bright student who opted for engineering to join one of the IITs. All the other institutes were below them in terms of facilities and prestige. There is no reason why the IITs cannot do the same. They have departments of humanities also and some quite capable people on the faculty. Business management is an area in which they can directly compete with other universities. IIMs have a limited focus whereas IITs are universities in every sense of the word though their special focus is on engineering and technology. Technology is the application of science and engineering to technical problems in different areas of activity. To talk of the IITs is to underline the point that the IITs have to function as universities and nothing less than that.

The Indian Institutes of Technology (IITs) are considered as the most prestigious engineering and technology institutions of India. At present there are 23 IITs in India, established during different periods of time. Pandit Nehru, the first prime minister of India, credited to take forward the initial ideas of Ardeshir Dalal from the Viceroy’s Executive council to envision the IIT system. The idea was to “provide scientists and technologists of the highest calibre who would engage in research, design and development to help building the nation towards self-reliance in her technological needs.” The first Indian Institute of Technology was established in 1951 at Kharagpur, followed by IIT Bombay (1958), IIT Madras (1959), IIT Kanpur (1959) and IIT Delhi (1961). In 1961 the IIT act was passed by Indian parliament which declared these institutions as institutes of national importance. All these five IITs were established through foreign collaboration process. Almost three decades later, IIT Guwahati was established in 1994. This was followed by converting Roorkee University to IIT Roorkee in 2001. During 2008-2012, nine more IITs were established at Bhubaneswar, Gandhinagar, Hyderabad, Jodhpur, Patna, Ropar, Indore, Mandi and Varanasi. And most recently, 7 new IITs at Palakkad, Tirupati, Dhanbad, Bhiai, Goa, Jammu and Dharwad are proposed or established during 2015-2016.

As IITs are of different age, we have grouped them into different sets: old IITs (7 IITs which are at least 15 years old), new IITs (9 new IITs established during 2008-2012) and recent IITs (7 IITs established during 2015-2016).

**4 Research Methodology**

*4.1 Participants*

The engineering students of IIT (ISM)-Dhanbad were the target for the study. The technique used for sampling was a non-probability technique. 115 first year students of the Department of Industrial Engineering Management (IEM) was sampled using the purposive sampling technique. However, on the day of the survey, 110 students were present in class to participate in the survey.

*4.2 Data collection technique and Procedure*

A seven point Likert scalequestionnaire was administered to the students during their class session. The scale measured 7 as very strongly agree 4 represented neither agree/ disagree and 1 represented very strongly disagree. The simple nature of the questions made the students complete it in ample time. The participants were initially informed that their responses had nothing to do with their academic performance. Their genuine responses were rather needed so anonymity was assured. They were not paid but were informed that the success of the study solely depended on their genuine responses so their maximum cooperation was needed.

*4.3 Measures*

To assess Emotional Intelligence (EI)of the participants 16 items were adapted from the WEIP-S questionnaires by Jordan and Lawrence (2009). These items were adapted because the items particularly measures the EI of people in a team. Since this study was about assessing the EI of participants in team it was acceptable to have used that. Again, 4 items were added to measure the EI of the participants based on the Daniel Goleman’s Mixed Model. These variables were added due to an earlier research conducted by Rapisarda (2002) which revealed a significant correlation with team cohesion. In total, there were 24 items assessing the EI levels of the participants.

To measure the cohesion of the team, 13 items developed by Stokes (1983) were adapted. The questionnaire measured the risk taking, attraction to group members and instrumental value of the team. In all, one questionnaire measuring EI and TC was developed with 3 items measuring the demographic variables of the participants was used.

*4.4 Tools and Statistical Methods*

The data was analysed and assessed with the help of statistical package for social science (SPSS version 2.0). As this software is best fit for analysing psychometric data. First, to check whether the questionnaire was reliable, a Cronbach’s alpha (reliability test) was performed. Also, descriptive statistics was performed on both the demographic variables, dependent and independent variables to explain in details about the population understudy. Second, a simple linear regression analysis was performed on the independent variable (EI) and the dependent variable (TC).

Furthermore, a moderation analysis was performed on the demographic factors (gender, age and family income) with EI on TC. The Andrew Hayes Macro Process version 3.0 was used in the moderation analysis.

Lastly, to find a relationship between EI and TC, the Pearson correlation analysis was performed. The sub competencies of EI (achievement orientation, empathy, influence and self-confidence) was also correlated with TC.

**METHODOLOGY**

**Type of study**

The study conducted was a descriptive study. This method is an appropriate choice as the research aims to assess the Emotional Intelligence (EI) levels of students.

**Population and sample of the study**

Students at IIT (ISM) Dhanbad were the target population for the study. Students from the Computer Science and Engineering, Petroleum, Industrial and Civil Engineering were sampled for the study. The purposive sampling technique was employed to sample 200 students. Purposive sampling technique was used because the study specifically wanted engineering students.

**Data collection technique and Procedure**

The researchers prepared an Emotional Intelligence scale consisting of 40 items based on the Daniel Goleman mixed model. The scale was in two parts, the first part consisting of (5) items measured the participants’ demographic variables and the remaining thirty-five (35) items measured emotional intelligence.

The scale consisted of five (5) sub scales of EI which are self-awareness (items 1-7), self-management (items 8-14), motivation (items 15-21), empathy (items 22-28) and social skills (items 29-35). The questions were rated on a five (5) point Likert scale which 5 represented strongly agree, 4 agree, 3 neither agree/disagree, 2 disagree and 1 strongly disagree.

In the calculation of the sub scales, the scores of the answers given to the items that comprised of the sub scales are summed and the average scored were found. The score of emotional intelligence was also calculated by summing all the 35 items of the scale and calculating the average. An increasing score depicts highness of the scale while a decrease score depicts lowness of the scale. Thus score 1 and 2 means students have low EQ, score 3 means somewhat emotionally intelligent and it can be improved and developed. Score 4 and 5 means that EQ is high.

**Tools and Statistical Methods**

The data was analysed and assessed with the help of statistical package for social science (SPSS version 20). As this software is best fit for analysing psychometric data. First, to check whether the questionnaire was reliable, a Cronbach’s alpha (reliability test) was performed.

Also, descriptive statistics and independent sample t-test and one-way ANOVA analysis were employed.

1. **Methods applied for the Study**

*2.1 Participants*

The nursing students at Patliputra Medical College and Hospital (PMCH), Dhanbad were the target for the study. PMCH is a Government Hospital and it was chosen because it is one of the prestigious medical colleges in Jharkhand state which produces qualified and well trained medical practitioners in the state. A non-probability sampling technique was used to sample Hundred (100) nursing students. The purposive sampling technique was employed.

*2.2 Data collection technique and Procedure*

A 5 point Likert scalequestionnaire was administered to the students during an interactive session. The scale measured 5 as strongly agree 3 represented neither agree/ disagree and 1 represented strongly disagree. Although the original scale was a 7 point Likert scale, the ambiguity of it made the researchers to reduce its skewness to a 5 point Likert scale for easier understanding and response. The questions were simple and this made the students complete it in ample time. The participants were initially informed that their responses had nothing to do with their academic performance but their genuine responses were rather needed. They were not paid but were informed that the success of the study solely depended on their genuine responses so their maximum cooperation was needed. Anonymity was assured.

*2.3 Measures*

To assess Emotional Intelligence (EI)of the participants, 16 items were adapted from the WEIP-S questionnaires by Jordan and Lawrence (2009). It measures four constructs of EI and uses Salovey and Mayer’s (1990) EI’s model. These items were adapted because the items particularly measure the EI of people in a team. Since this study is about assessing the EI of participants in team, it was acceptable to have used that.

To measure the cohesion of the team, 13 items developed by Stokes (1983) were adapted. The questionnaire measured the risk taking, attraction to group members and instrumental value of the team. In all, one questionnaire measuring EI and TC was developed with 3 items measuring the demographic variables of the participants was used.

*2.4 Tools and Statistical Methods*

The data was analysed and assessed with the help of Statistical Package for Social Science (SPSS version 2.0). As this software is best fit for analysing psychometric data. First, to check whether the questionnaire was reliable, a Cronbach’s alpha (reliability test) was performed. The Cronbach’s alpha for Emotional Intelligence (EI) is 0.751 and for Team Cohesion (TC) is 0.794. This indicates that the scales are reliable and therefore, it could be used in further analysis.

Also, descriptive statistics was performed on the demographic variables. The total sample understudy is 100, all participants are females and their ages range from 18 to above 30 years. Majority of them were between the ages of 18-23 (that is, 86 participants) while 24-29 is (that is, 13 participants) and above 30 is only 1 person. Most of the participants fall within less than 1 lakh (i.e 81 participants) as their annual family income. 16 participants fall within 1 lakh -3 lakhs and only 3 of the participants indicated above 3 lakhs as their annual family income.

The Pearson correlation analysis is performed to find a relationship between EI and TC. The sub competencies of EI (own aware, other aware, other aware and other manage) is also correlated with TC.

Furthermore, a simple linear regression analysis is performed using the independent variable (EI) on the dependent variable (TC). To check whether the independent variable EI could predict TC amongst the participant's understudy.

Lastly, a moderation analysis is performed on the demographic factors (gender, age and family income) with EI on TC. This is performed to check whether an individual’s demographic factors could influence the effect of EI on TC. The Andrew Hayes Macro Process version 3.0 is used in the moderation analysis.