2008

Military Leadership Potentials as Related to Birth Order, Family Size and Socio Economic Status in Bangladesh

Hossain, Zahid

University of Rajshahi

MILITARY LEADERSHIP POTENTIALS AS RELATED TO BIRTH ORDER, FAMILY SIZE AND SOCIO ECONOMIC STATUS IN BANGLADESH

THESIS SUBMITTED TO RAJSHAHI UNIVERSITY FOR PARTIAL FULFILLMENT OF THE DEGREE OF DOCTOR OF PHILOSOPHY

By

ZAHID HOSSAIN

Department of Psychology, University of Rajshahi,
Bangladesh

DECLARATION

Except where full references have been given, the dissertation "MILITARY LEADERSHIP POTENTIALS AS RELATED TO BIRTH ORDER, FAMILY SIZE AND SOCIO ECONOMIC STATUS IN BANGLADESH" contains the independent original work of the researcher.

This research has not been submitted before, nor it is being submitted anywhere for award of any degree.

06 ..... September, 2008

ZAHID HOSSAIN
Ph.D. Research Fellow
Department of Psychology
University of Rajshahi

Certificate

Certified that the thesis entitled MILITARY LEADERSHIP POTENTIALS AS RELATED TO BIRTH ORDER, FAMILY SIZE AND SOCIO ECONOMIC STATUS IN BANGLADESH has been completed by Zahid Hossain of Rajshahi University Psychology Department for the award of Ph.D. Degree. The work has been done under my supervision. I now recommend for the examination of the thesis.

A. Hasan

Professor Anwarul Hasan
Ph.D., C. Psychol.
Department of Psychology
University of Rajshahi

ACKNOWLEDGEMENT

The researcher wishes to acknowledge the cooperation and help of all those who have directly or indirectly assisted this research. He expresses sincere thanks to his supervisor Professor Dr. Anwarul Hasan, Department of Psychology, University of Rajshahi for cooperation, guidance and encouragement to complete the research.

The researcher renders deepest gratitude to Brigadier General Nayem, Ex President of Inter Services Selection Board (ISSB) for his supports to the researcher to pursue higher study. It was quite impossible to initiate the research without his cooperation. He also cordially thanks Maj Farid, Ex General Stuff Officer (GSO) – II (S&D), ISSB to obtain permission form the authorities to conduct this research.

The researcher conveys his best wishes and regards to Brigadier General Imrul Kayes, President, ISSB for his inspiration and for granting all supports which were required to carry out this research. Without his blessings and positive attitudes, it would be extremely difficult for the researcher to complete this research work. The researcher is also thankful to Maj Pasha, GSO-II (S&D), ISSB for his mature advices.

The researcher is very much thankful to Captain Faruk (Retd), Bangladesh Navy, Ex Commanding Officer, BNS HAJI MOHSIN for permitting Naval approval for this higher study.

The researcher is also highly grateful to all the Psychologists of ISSB, specially Col Arshad, Col Rafique, Sqn Ldr Islam, Maj Shameem, Maj Zahir, Maj Kabir, Sqn Ldr Zakir, Maj Jahangir, Maj Mahbub, Flt Lt Rumanna and Lt Habib, BN for numerous assistances and for taking extra work load in favour of the researcher when he used to keep himself busy in this research work.

Researcher will always remember the assistance and advices of Professor Dr. Emon, Department of Statistics, Rajshahi University for enriching the knowledge of the researcher regarding design and data analysis.

The researcher will remain grateful and thankful forever to his wife Reshmin Zahid for all her cooperation in all phases of this research work. He is also thankful to his eldest son Rezwan Bin Zahid for allotting his computer in this research work instead of playing games in it. Researcher's youngest son Farhan Bin Zahid can claim his credit by providing experience to his parents that how their first son had been suddenly perceived elder and more matured after his birth. That was a bit relevant with this research and helped the researcher to get practical experience regarding effects of birth order and family size.

ABSTRACT

The dynamic factors of society have made the selection in military as a continuous developmental process. The basic objective of the present study was to discover the effects of birth order, family size and socio economic status (SES) on potential traits of military leadership.

Birth order consisted of three different levels as first born, middle born and last born. Single child, two children and more than two children were three different levels of family size. SES also comprised of three different levels as upper middle, middle and lower middle class in the present study. The dependent variables of the present study had been set few potential traits of military leadership as ascendancy, responsibility, emotional stability, vigour, cautiousness, personal relation, original thinking and sociability.

Present research was a correlational study and the sample had been drawn (N = 718) from Inter Services Selection Board (ISSB) by following Simple Random Sampling (SRS). Bengali version of Gordon Personal Profile (GPP) and Gordon Personal Inventory (GPI) were used together to measure dependent variables. Validity of GPP and GPI had been checked in this study before these tests were administrated. Stepwise Multiple Regression Analysis was applied for analysis of obtained data.

Results showed that first born, middle born and upper middle class had positive effect on ascendancy (β = 9.423, β = 4.328 and β = 3.340). Whereas, negative effect had been found with single child (β = - 4.869).

Regarding responsibility, results showed that first born had positive effect on responsibility (β = 4.363). Whereas, negative effect had been found with single child and lower middle class (β = - 3.433 and β = - 1.550).

Middle born and middle class had negative effect on sociability (β = -2.889 and β = -1.006). Whereas, positive effect had been found in individuals from more than two children families (β = 5.633).

In measuring original thinking, Coefficients showed that first born had positive effect on original thinking ($\beta = 0.776$).

Coefficients of multiple regression analysis showed middle born, single child, two children and lower middle class had negative effect on personal relation ($\beta = -2.329$, $\beta = -8.205$, $\beta = -3.575$ and $\beta = -1.816$).

It was also found that first born and last born individuals; persons from more than two children and upper middle class families possess positive effect on vigour ($\beta = 4.761$, $\beta = 3.706$, $\beta = 4.383$ and $\beta = 1.584$). Whereas, single child showed negative effect on vigour ($\beta = -4.156$). All the above mentioned β values were found statistically significant but no significant relation was found in measuring emotional stability and cautiousness.

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CHAPTER - I

INTRODUCTION

INTRODUCTION

The Military (Army, Navy and Air Force) plays a vital role not only at the time of crisis, but also during the peace time of the nation. The Military personnel are devoted to defend the nation from foreign assaults by any means, risking even their own lives to preserve the dignity, honor, and resilience of the country. These characteristics require a certain level of devotion and determination in potential soldiers. Therefore, the most important aspects of Military Services are command, control, and discipline.

These aspects are mostly exerted by the officers who are serving in the Military Services. Their goal is to accomplish the sanctified responsibilities of the nation, duties that demand strong leadership skills. For this reason, the leadership qualities of the officers have been greatly emphasized in the Military Services.

Every nation has its own selection board which selects their leaders, meaning the officers of the Military Services. Inter Services Selection Board (ISSB) of Bangladesh is a unique organization and is the selector of future leaders in the Bangladesh Armed Forces. The ISSB works to choose officers that will fulfill the needs of the armed forces. In order to succeed in this goal, the ISSB follows many different scientific tools and methods.

Through the detailed process of selection, the polished and balanced characteristics of prospective officers are reflected and emphasized to the selection board. These characteristics are necessary for upstanding the reputation and tradition of the Armed Forces. The admirable qualities of the Bangladesh Armed Forces are established and recognized not only within the country, but also in abroad while carrying out missions for the United Nations.

Selection of military personnel is the first step of the process to select military leaders. The main objective of selection is to discover the potentials of

an individual, which are very much required for military leadership. These military leadership potentials develop through training, evolve into a maturity that results in the nation's gain of a military leader. Therefore, appropriate knowledge regarding military leadership potentials is essential for selection, where the whole process begins. Present research will likely lead to the discovery of a few family environment and structure related factors which have direct and indirect impact on military leadership potentials. Understanding the influence of family environment may donate a few factors within the continuous developmental process of personnel selection in the Military.

"Division 19" is the Division of Military Psychology of the American Psychological Association (APA). This division is the first specialized divisions established in APA in 1946. Division 19 offers an affiliate membership status for students and psychologists who are not APA members. It is common for military psychologists to belong to other APA divisions, such as Experimental Psychology (Division 3); Evaluation, Measurement and Statistics (Division 5): Clinical (Division 12); the Society for Industrial and Organizational Psychologists (Division 14); Applied Experimental and Engineering (Division 21); Health (Division 38); and Family (Division 43). Many are members of other professional organizations such as the American Psychological Society, Human Factors Society, and the Inter-University Seminar.

The Division of Military Psychology publishes its own quarterly journal, *Military Psychology,* which features original behavioral science research findings performed in a military setting. *Military Psychology* has published contributions from a number of countries and has featured special issues on topics of particular interest to the military research community: Team Processes, Selection of military personnel, Training and Performance; Women in the Navy; Military Occupational Analysis; Stimulants to Ameliorate Sleep Loss during Sustained Operations; and Military Service and the Life-Course Perspective. Other special issues include The Impact of Chemical Protective Clothing on Performance and

Enhanced Computerized Adaptive Testing. The required profile qualities of a military leader are also greatly emphasized in Military Psychology.

History notifies the influence of many great military leaders in changing stories of nations. The *Oxford English Dictionary* (1933) notes the appearance of the word "leader" in the English language as early as the year 1300. However, the word "leadership" did not appear until the first half of the nineteenth century in writings about political influence (Bass, 1989).

Leadership is a process by which a person influences others to accomplish an objective and directs the organization. Leaders carry out this process by applying their leadership attributes, such as beliefs, values, ethics, character, knowledge, and skills. Although position as a leader gives the authority to accomplish certain tasks and objectives in the organization, this power does not make one a leader rather it simply makes a boss. Leadership differs in that it makes the followers want to achieve high goals, rather than simply bossing people around. Bass (1989) theory of leadership states that there are three basic ways to explain how people become leaders. The first two explain the leadership development for a small number of people. These theories are:

1. Some personality traits may lead people naturally into leadership roles. This is the ***Trait Theory***.

2. A crisis or important event may cause a person to rise to the occasion, which brings out extraordinary leadership qualities in an ordinary person. This is the ***Great Events Theory***.

3. People can choose to become leaders. People can learn leadership skills. This is the ***Transformational Leadership Theory***.

Military leadership is related with both Trait and Transformational Leadership theories. The individuals, who have some specific potential, are trained to become a military leader. The military potentials are basically few

specific personality traits which are developed by the interaction of heredity and environment. Environmental aspects get more priority in assessing military leadership potentials because, hereditary aspects are not easy to detect. The environment which is created by the birth order, family size and socio economic status, influence development of personality traits which are required to be a military leader.

LEADERSHIP

Leadership suggests something more than control of a situation. The man, who spontaneously looks after the problems of a nation or organization and makes an effort to solve it, usually exerts influences over a group. On the other hand a military officer with an automatic weapon subdues an enemy squad may have perfect control of that situation. First one may be termed as "***genuine leader***" and the second one as "***appointed leader***".

A genuine leader is furnished by the heredity and the environment, here hereditary effects are more. An appointive leader is endorsed mainly by the environment. A prospective appointive leader who possesses dynamic traits may become an asset of a particular organization. This is why it is very necessary to have a scientific method to determine the potentials of an appointed leader.

FEW DEFINITIONS OF LEADERSHIP

Few definitions are given here to clarify the term "leader" and "leadership".

a. Leadership is the behaviour of an individual when he is directing the activities of a group towards a shared goal (Hemphill & Coons, 1957).

b. Leadership is the initiation and maintenance of structure in expectation and interactions (Stogdill, 1974).

c. Leadership is the process of influencing the activities of an organized group toward goal achievement (Rauch & Behling, 1984).

d. Leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes (Rost, 1991).

e. The leader is one who mobilizes others to a goal shared by leader and followers (Wills, 1994).

f. A leader is an individual (or, rarely, a set of individuals) who significantly affects the thoughts, feelings, and/or behaviours of a significant number. (Gardner, 1995)

g. Leadership is the art of mobilizing others to want to struggle for shared aspirations (Kouzes and Posner, 1995).

TRANSACTIONAL VERSUS TRANSFORMATIONAL LEADERSHIP

More modern theories of leadership are based not so much on classic traits of leadership, but on analyses of the relationship between the leader and the follower (Gen Jacques, 1995). Particularly relevant the current debate between transactional and transformational leadership.

Transactional leadership is considered as a common form of leadership in business, in politics, and in government bureaucracy. Leaders must engage in a transaction with their subordinates. This leadership consists of accomplishing the tasks at hand while satisfying the self-interests of those working with the leader to do so. The leader sees to it that promises of reward are fulfilled for those followers who carry out successfully what is required of them (Francis & Bernard, 1990). However, this kind of leadership has limitations. A transaction creates no enduring purpose that holds the parties together. It does not bind the leader and follower in a mutual and continuing pursuit of a higher purpose (James, 1978).

Active transactional leadership depends on reinforcement - rewards (or avoidance of penalties). The less active transactional leadership is management-by-exception or contingent negative reinforcement, and the extreme end of inactivity is laissez -faire leadership.

In contrast, transformational leadership occurs when one or more persons engage with others in a way that raises both leaders and followers to higher levels of motivation and morality. Their purposes, which might have started out as separate but related. Leadership experts appear to prefer transformational leadership to transactional leadership. U.S. Lt Gen Walter argues that there is "a particularly formidable argument for frequent use of a transformational style that nourishes a strong sense of responsibility and initiative among subordinates. Transformational leadership, by the enlightened use of inspiration, communication, and understanding of human behavior, can motivate subordinates to achieve more than could ordinarily be expected (Lt Gen Walter & Ulmer, 1989).

THE DIMENSION OF THE LEADERSHIP

Investigation continues to find out leadership traits. Fiedler has demonstrated, leadership is primarily dependent on three situational components (Fiedler, 1964):

1. The leader's personal relations with members of his group.

2. The power and authority which the position provides.

3. The degree of structure of the group task.

Two investigators at Ohio State University studied Hemphill's hypothesis of nine different dimensions of leadership (Halpin & Winer, 1952):

1. Initiation-degree to which the leader originates new ideas or behaviors.

2. Membership-frequency with which a leader interacts with members.

3. Representation-degree to which leader defends the group against attack and promotes the interest of the group.

4. Integration-encouraging of pleasant group relations and reducing intragroup tensions.

5. Organization-defining, planning, and structuring of his own and members' work.

6. Domination-restricting behavior, opinions, and decisions of members.

7. Communication-exchanging information with members.

8. Recognition-engaging in behavior which expresses approval or dis. approval of members.

9. Production-setting levels and standards of achievement and encouragement of output.

After extensive study of air crews (Halpin & Winer, 1952), it was found that the nine qualities had to be reappraised, and four dimensions had the most validity:

1. Consideration-extent to which the leader had positive social relations and an understanding of the weaknesses of his men, although there was no implication of sentimentality in his relations with his followership.

2. Initiating structure-organizational ability. Namely, "maintaining definite standards of performance," "making his attitudes clear to the crew," etc. Of the four, this appeared to be the most critical factor of leadership.

3. Production emphasis-stressing the meeting of schedules, extended work effort, and the like.

4. Sensitiveness or social awareness-insight into interactions between the crew and himself and within the crew members themselves-not blaming crew members for their mistakes and not making scapegoats of his subordinates.

THE MILITARY LEADERSHIP

The military leaders are basically appointed leaders and they follow transformational leadership style. This requires qualities of working together to accomplish accepted goal. According to the Field Manual 22-100: of the US Army, (1987), Military Leadership is the art of direct and indirect influence and the skill of creating the conditions for organizational success to accomplish missions effectively. Military leadership is the art of influencing and directing people (*followers*) to accomplish the *mission*. According to General Jacques Dextraze (1973) leadership is the "art of influencing others to do willingly what is required in order to achieve an aim or a goal. The difference between the corporate ethic of the military and the managerial ethic is important. For, unlike civilians who work for a private company, soldiers ultimately are expected to die for their country if necessary. This is what General John Hackett has called the "unlimited liability" of the soldier. Leadership remains the most baffling of arts as long as we do not know exactly what makes men get up out of a hole in the ground and go forward in the face of death at a word from another man (John, 1993). The ability to prepare or get ready to fight, skill in actual fighting, and the will to prevail in combat against a foe, are the critical dimensions of Military leadership. According to the Journal of Applied Psychology (Vol. 88, No. 2), Platoons perform better during high-stress simulated combat when they have leaders who reward and build shared values among soldiers. Thus a balanced personality profile of a military leader has a great impact on his/her under command.

A position or rank in military is not good enough to persuade a follower to execute his assignment. Often a question comes across whether one can inculcate military leadership qualities or not. General Archibald P Wavell in his book 'General and Generalship' says "No amount of learning will make a person a leader unless he has the natural qualities of one." On the other hand Colonel Sherman Kiser in his book 'The American Concept of Leadership' conceives leadership as an exact science capable of being understood and practiced by anyone. Some other military thinkers view the leadership aspects among the forces in a different way. They concur with the believe that certain inherent leadership qualities like self confidence, initiatives, sense of responsibility etc are required to be an military leader. These abilities can not be instilled but which are latent or dormant can be developed (Maj Syed, 2005).

The ideas of different military thinker are given below for better comprehension (Maj Syed, 2005).

THOUGHTS OF JAMES L STOKESBURY

Stokesbury chose to learn leadership by a method he thought to be the best, which is by studying the examples provided by history. He opted four historic leaders namely Marquise, Alexander, Suvorov, Robert Lee and Henry Philippe who were the masters of art of leadership in their time. After critically analyzing them he narrowed down their beliefs to an extent as to find out whether the essence of leadership is of artistic nature or a more tangible scientific one. Some of the ideas are the follows:

a. A leader must have belief in his men.

b. Loyalty is a two way street.

c. Treat humanly.

d. Have high ideals.

e. Selflessness is a prime requisite.

f. What ever high qualities a person has, he has to use them as the means to achieve great ends.

g. Lead rather than direct.

Stokesbury suggests that the higher element of leadership remain as an art, whereas the lesser elements can be treated by artifice.

LEADERSHIP ACCORDING TO GENERAL MATTHEW B RIDGWAY

General Matthew B Ridgway maintains that the power of leadership can be increased manifold through knowledge of leadership principles and practice in their application. According to him the chief ingredients of leadership are three C's – Character, Courage and Competence. His character definition encompasses self discipline, loyalty, readiness, to accept responsibility, willingness to admit mistakes, selflessness, modesty, willingness to sacrifice when necessary, and faith in creator. On the other hand courage is of two kinds, physical and moral. Both of these are products of character forming process, of the development of self-control, self discipline, physical endurance, of knowledge of one's job and, therefore, of confidence. He also found out some more elements like farsightedness, decision making ability at a critical point and time, knowing men, keeping under command informed, etc. but the fact remains that the variables of human nature combined with those of combat and to some extend peacetime training, make exercise of leadership far more of an art than a science- as viewed by the general. But in order not to curb the learning process he brought forward certain sets of suggestion as quoted below:

a. Read widely and wisely all the history and biography possible. Accrue all the personal experiences of battle tested persons.

b. Study thoughtfully the records of past successful leaders and adopt their methods.

c. Work hard to keep fit.

d. Work hard in one's own way at being top at one's job.

e. Keep the three C's always before one's mind along with faith in creator.

f. Be inwardly humble.

GENERAL S.L.A. MARSHAL'S VIEW

General Marshal brought forward a more practical view of leaders and leadership. He considers every leader to be a down to earth human being with their points of personal weakness. It is not necessary that a leader have to be plaster saint, laden with all human virtues, spot less in character and fit to be anointed with a super man legend. He also does not need to be a prodigy or a whiz-kid. Of 105 major Generals who served in world war-I, 56 had failed to score more than 50 percent marks in mathematics. Of 275 in world war-II, 158 were in middle group of among the dubs in the same subject therefore, one should not undermine one's own potential for being a leader merely because of his weakness on few aspects as stated above. In a nutshell, the essences of leadership according to the General Marshal are:

a. Quite resolution.

b. The hardihood to take risk.

c. The will to take full responsibility of actions.

d. The readiness to share its rewards with subordinates.

e. An equal readiness to take the blame when things go adversely.

f. The nerve of survive storm and disappointment and face toward each new day with the score sheet wiped clean, neither dwelling on one's successes nor excepting discouragement from one's failure.

Different thoughts of James Stokesbury, General Matthew and General Marshal provoke some personality traits; require to be an effective Military leader. Sociability (loyalty up and down), good personal relation with followers (treat humanly), moral values, persistency, physical and psychological courage, discipline, sense of responsibility, ability to make decision, knowledge, physical fitness, etc are the examples of the personality traits of a military leader.

The military leadership can be elaborated through following figure:

Figure 1. Flowchart of Military Leadership

Above figure shows the flowchart of military leadership. Latent qualities (military leadership potentials) are discovered through the process of selection. Selected people are trained to become appointed leader and subsequently they are expected to practice transformational leadership. Present study will be concentrating into Stage – I and in some extend into Stage – II where the whole process of military leadership begins.

POTENTIAL TRAITS OF A MILITARY LEADER

According to the Oxford Advanced Learner's Dictionary (Sixth Edition, 2001) the word "Potentiality" is publicized as a noun and the meaning is "A power or a quality that exist and is capable of being developed". Oxford Dictionary of Synonyms and Antonyms (2003) showed different synonyms of the word "Potential" as different adjective: hopeful, latent, prospective, etc and as noun: aptitude, capability, possibility, resources, etc. The definition and

synonyms of potential indicates that potential exists in present as a form of resources or capabilities and possesses scopes for future development. As an example, money is one of the potential factors to become a businessman. It is not necessary that a person having sufficient money will chose business as his profession but he has the scope to do so.

On the other hand, a personality trait is a tendency to behave in a predictable or reliable manner (Bruno, 1986). Traits have also scopes for future development with maturity. These traits can be also considered as potentials if it is treated as resources for any future behaviour. In that way, required traits of military leadership have been treated as military leadership potentials in the present study.

Many investigations have documented that personality traits are remarkably stable (McCrae & Costa, 1990), they have a significant hereditary component (Loehlin, 1992), and they have behavioral implications, that is, they influence behavior in any situation and they contribute to decide which situations persons are motivated to enter and participate in (Matthews & Deary, 1998).

According to General Service Training Pamphlet (GSTP – 0030) of Bangladesh Army (Leadership and Military Command) military leadership requires following traits: Alertness, Bearing, Courage, Decisiveness, Dependability, Endurance, Enthusiasm, Initiative, Integrity, Intelligence, Judgment, Loyalty, Social adaptability, etc.

According to the book of "Officership and Professional Ethics" of Canadian Armed Forces (page no 7-8), the commissioning scroll which authorizes and empowers officers of the Canadian Forces establishes five key personality traits:

1. Adherence to an ethic based on the core values of loyalty, courage, and integrity.

2. Provision of responsible service to the state.

3. Perfection of the profession of an officer.

4. Exercise of command and legitimate authority over subordinate ranks, and obedience to the lawful commands of superiors.

5. Accountability for actions taken.

Few traits of personality are more required within a military leader than other leaders (Maj C.A. Cotton, 1979). These are:

- Devotion or self-sacrifice
- Loyalty
- Planning Ability
- Knowledge
- Integrity
- Intelligence
- Courage
- Physical Stamina
- Dynamism
- Emotional Intelligence, etc

Certain inherent leadership qualities like self confidence, initiatives, sense of responsibility etc are required to be a military leader. These abilities can not be instilled but which are latent or dormant can be developed (Maj Syed, 2005).

All leaders born in a family or in broader sense in a society, where his/her personality starts to develop. Individual's leadership traits are determined and

influenced by the variables of that particular family or society. There is no doubt that, it is also being influenced by the heredity. But if we consider the heredity as not easily being controlled or determined, then environmental factors would have been more emphasized.

In case of personnel selection it is also found very difficult to assess someone by his/her DNA rather assessment of environment. Few significant environmental factors which influence the personality and at the same time very much related with the present research are described below:

FAMILY DETERMINANTS

Scientific studies of family in wide variety of cultures shows five universal causes that influence personality traits (Hurlock, 1979, p.351). These are:

a. **Time Spend in the home.** Family influence on personality is high when the major part of one's time is spent in the home with his/her family members. It imposes family's attitudes, values and behaviors within the individual. Before the adulthood stage, the amount of time spend in the home is found higher than later stages.

b. **Control over behaviour.** Usually family members exert more control over an individual's behavior than any other person in the society. Basically almost in every culture mothers control child training and the father control money matters. One teacher controls a child's behavior in the school for few hours but most of the time behavior is being controlled by the parents or elder members of the family.

c. **Emotionally toned relationship.** Usually a child or adolescent have a strong emotional attachment with his family members than others. The persistent family relationship reinforces the effect of the emotional tie. Even after death of a family member it is being continued.

As an example, one boy may become an honest man as because his dead father was.

d. Early social relationship. At the time when the foundation of personality pattern is being laid, the child's primary social experiences take place in the home. From these early experience child acquires his attitudes, values and pattern of social life (Flaherty & Sister, 1965).

e. Security of environment. The importance of the home to the child's feeling of the security has been emphasized by Bossard and Boll (1966). Home is the place where a child comes back with his happy and bitter experience. He wants to share his emotions with the family members and seeking physical and psychological shelter from them. Studies show Self concepts are damaged because of the family breakup (Goode, 1974)

INFLUENCE OF FAMILY ON PERSONALITY DEVELOPMENT

Directly and indirectly family influences our personality. Directly, the family influences personality development by molding and by communication. Indirectly, the influence comes from identification, unconscious imitation of attitude, behavior patterns, etc. The development of personality is also being influenced by mirror image of self which is developed by own self and through the members of his family. Basically in the childhood parents use to mold the behavior by training which influences the behavior of the children at his latter stages (Heilbrun & Orr, 1965). Through communication parents transmit attitudes and values to the children. In the early stages boys identify themselves with his father and at the same times girls identify themselves with her mother. When a child identifies him or herself with his/her parent develop a similar type of personality that of the parent. Study shows that both children and young adolescent acquire patterns of behavior similar to family members (Clarke & Olson, 1965).

Two of the major factors that interact with above-mentioned factors are:

a. Birth order and

b. Family size

BIRTH ORDER

The phrase birth order refers to the order of birth. Children with siblings are "firstborn" or "later borns." Alfred Adler developed a theory of how later borns vary in personality depending on family size. Children with no siblings are "only children." There has been much debate within the academic community in recent years over whether and how birth order influences the characteristics of an individual.

The influence of birth order on the development of personality is a controversial issue in psychology. It is widely believed that personality is strongly influenced by birth order, but there are critics who dispute this. Personality psychologists largely (though by no means without debate) agree that the Big five personality traits (also known as Five Factor) represent something like a natural taxonomy of human personality variables. Cross-linguistically the vast majority of adjectives used to describe human personality fit into one of the following five areas, easily remembered by the acronym OCEAN: Openness, Conscientiousness, Extroversion, Agreeableness and Neuroticism.

Frank (1997) has mounted evidence that birth order effects on the Big Five are strong and very consistent. Using a scale between bipolar adjective pairs (example: hard-working to lazy) and intra-family ratings with tens of thousands of respondents Sulloway alleges firstborns to be more conscientious, more socially dominant, less agreeable, and less open to new ideas compared to later borns. In a cross-cultural replication of Sulloway's work anthropologist Paul (2002) collected several hundred within-family ratings among horticulturalist

Shuar Indians in Ecuadorian Amazonia and found nearly identical correlations between the Big Five and birth order among these non-westernized people.

The ordinal position of child's birth in relation to his siblings has a marked influence on personality. The Psychological position of a person in the family, resulting from his order of birth, affects his self-concept both *directly* and *indirectly*.

a. The direct effect comes from the role the person is expected to play in the home and what different members of the family expect of him.

b. Indirectly, ordinal position influences the self-concept through the competitiveness among siblings and the way in which other members judge him.

The behaviour rating for children of different ordinal position shows First-born and Middle-born children present more problems for their parents than those born later (Shrader & Leventhal, 1968). Firstborn enjoys a number of advantages and want to control other born siblings. On the other hand last born children are the baby of the family and are usually pampered by the other family members.

Elizabeth B Hurlock (1976) shows some common characteristics associated with ordinal position. Say,

First Born:

a. Behave in a mature fashion because of his association with adults and because he is expected to assume responsibilities.

b. Resents not having free time to do what his peers do.

c. Tends to conform to group wishes and pressures as a carryover of conformity to parental wishes.

d. Have feelings of insecurity as a result of being replaced as the carter of attention by a second child.

e. Is often spoiled and may become petulant when he receives less attention and is subjected to more parental demands and expectations.

f. Tries to achieve success in some area in order to win back parental approval if he sees it shifting to younger siblings.

Middle Born:

a. When compared unfavourably with and older sibling becomes resentful or tries to emulate the other's behaviour.

b. Resents privileges an older sibling is granted.

c. Acts up and breaks rules to attract parental attention to himself and away from siblings.

d. Attacks younger siblings who get more parental attention than he.

e. Develops the habit of being an underachiever as a result of fewer parental expectations and less pressure to achieve.

f. Have fewer responsibilities than firstborn. Which he may resent if the firstborn tries to "boss" him.

g. Tends to turn to outsiders for peer companionship, which leads to better social adjustments than firstborns make.

Last Born:

a. Tends to be willful and demanding as a result of more relaxed parental treatment and less strict discipline.

b. Is spoiled by parents and siblings.

c. Have fewer resentments and a greater feeling of security as result of never being replaced by a younger sibling.

d. Is usually protected by parents from physical or verbal attacks form siblings, which encourages dependency and irresponsibility.

e. Tends to underachieve because of fewer parental expectations and demands.

f. Experiences good social relationships outside the home.

FAMILY SIZE

The size of family influences the personality by the amount of interaction at the very beginning of life. As the number of sibling increases in a family, there are fewer opportunities for parents to interact individually with each child (Sarafino & Armstrong, 1980). Men's preference for male children influences family size and for women as well as men, child survival and income of family is the important factors (Campbell & Puni, 2002). The kind of family a person grows up or lives in as an adult is influenced by its size. The people, who live under the same roof, interrelated in their patterns of living. The size of the family influences the personality pattern both directly and indirectly. Directly, it determines what role the person will play in the family constellation, what kind of relationship he will have with other family members, and to a large extent, what opportunities he will have to make the most of his native abilities. Indirectly, family size influences the personality pattern through the kind of

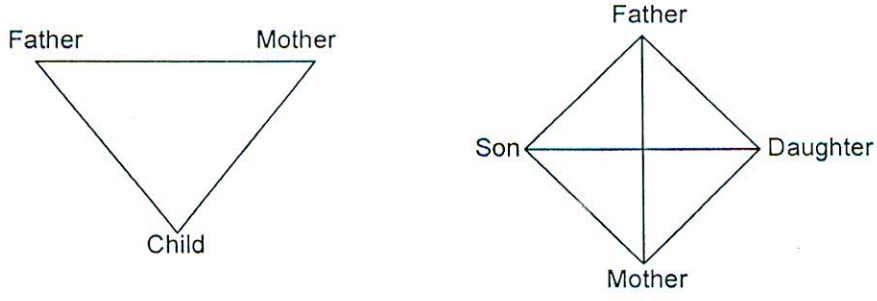
home climate fostered by families of different sizes and by the attitudes of the most significant members of the family toward the person.

According to the Bossard and Boll (1960) the number of the interpersonal relationship in a family can be determined by the following formula:

$$x = \frac{y^2 - y}{2}$$

Where x is the number of Interpersonal relationships and y is the numbers of family members. The interpersonal relationship may be explained by the following diagram:

Figure 2. Interpersonal Relation within Family Members



Above figure shows possible number of interpersonal relations within family members. The family with one child possesses three (3) different interpersonal relations and it becomes six (6) when number of sibling is increased by one (1).

FAMILY SIZE AND HOME CLIMATE

Only children develop a different personality pattern. Those who spend the formative years of their lives in a family with one or two siblings, differ from children who are members of large families. When a family is large, the work load is large, and it becomes much more important that all family members do their share. Furthermore, it is impossible for parents to devote as much time and attention to each child as is possible in a small family. In addition, because of economic restrictions, it is rarely possible in a large family to give all the children the material possessions, educational and recreational advantages and opportunities for social contacts that children from small families enjoy. People who grow up in large families often feel deprived and many develop feelings against the father for not earning enough to provide them with the advantages their friends have. The kind of association that exists between family members has a great impact on their personalities. This is determined more by how parents feel about their roles as parents and how satisfied they are with the number of children they have than by size itself. When parents want a large family, they have a warmer association with their children and accept the responsibilities. Parents' attitudes toward the number of children they have are also influenced by how soon the children come after marriage and by how much time there is between each new child's arrival. Those who have their children very quickly after marriage find themselves under great economic pressure, particularly if they married at an early age (Freedman and Coombs, 1966). Other conditions equal, parents will have a stronger desire for a large number of children if the husband-wife relationship is good than if it is strained (Christensen, 1968; Perrucci, 1968; Pohlman, 1968).

Another aspect of the connection between family size and personality is the amount of understanding and empathy found in families of different sizes. As was emphasized earlier, the ability of a family member to identify with another and to understand his interests, values, and points of view will go a long way

toward producing a healthy home climate. In a small family, parents have time to empathize with their children and to communicate with them. In a large family, there is less time, and, also, as the number of children increases, the gap between the generations grows wider. This combination of conditions tends to lead to less warmth and less understanding in the large family.

While most of the relevant studies have concentrated on the effects of family size on the personality patterns of children, there is evidence that family size also influences the personalities of parents and even grandparents. If a man regards having a large family as a symbol of virility, for example, the effect of a large family on his self-concept will be favorable. If he regards a large family as a millstone around his neck, preventing him from making the vocational success he was capable of, the effect on his self-concept will be negative. Even when a woman wants a large family, if the children come so close together that she feels overburdened with work, she may begin to feel that she is a martyr (Offner, 1960).

Most grandparents like to boast about how many grandchildren they have. This is especially true of those who have had smaller families of their own than they had hoped to have and who can limit their relationships with their grandchildren to the "fun-seeking role." If having a large number of grandchildren means that they must act as surrogate parents or must make financial sacrifices to help with the care and education of the grandchildren, attitudes of pride may be replaced by feelings of being imposed upon (Neugarten & Weinstein, 1964).

SOCIO ECONOMIC STATUS (SES)

Socio-Economic Status (SES) is one of the important factors of family environment which influences our personality traits. Socio-economic status has a great influence on personality development. Socio-economic status is not a unique term rather combination of educational attainments, professional status and the monthly income of the family members. Children could learn well from educated parents. On the other hand children of low socio-economic group may not get adequate nutrition for normal physical development. Thus socio-economic status influences the future behaviors of the children. One of the most significant contributions of the sociologists and psychologists has been intensive analysis of the class structure. The sociologists compared to other social scientists emphasized causative and associative relation of behavior with socio economic status. Dozens of studies have raveled sharp and unexpected differences among upper, middle, and lower class families. Sociologists generally "stratify" a population on the basis of such factors as income, education, type of occupation, and social status. A convenient and widely used classification (Joseph, 1958) in the decade of early seventy was based in a five – way breakdown is shown in the following table:

Table 1. American Classification of SES in the Decade of Early Seventy

Class Name	Estimated Percentage of Population	Typical Occupations	Typical Values
Upper Class	01	Ambassador, Top - Executives.	Graceful Living
Upper Middle Class	09	Executives, Doctors, Lawyers.	Carrier
Middle Class	30	Book Keepers, Sales Clerks.	Respectability
Working Class	40	Factory Workers, Bus Drivers, Electricians.	Security
Lower Class	20	Laborers, The Erratically Employed	Getting by

Above table shows American widely used classification in the decade of early seventy. It was based on five point breakdown into upper, upper-middle, middle, working and lower classes. It also describes different psychological values of different classes. The classification also revealed that Values of the major classes were evidenced by family-related behaviour. The general pattern of each class is described below:

The Upper Class Family

Although by far the smallest of the various social classes, the upper class is a tremendously powerful and influential segment of the population. Sometimes classed as the "upper-upper" or "Elite," they show little tendency either relinquish or to share their influence. The upper class young have typically less chance of avoiding to conform to family dictates (such as marring out side

the elite circle) and they have more to gain by helping their kin maintain their positions (William, 1964). It is the relative cause of isolation which sets the upper class apart from other social strata.

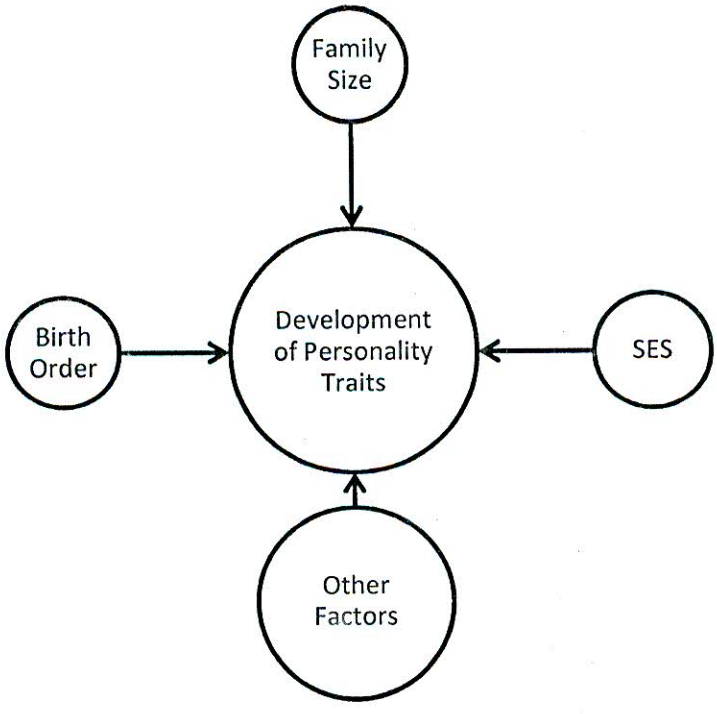
The Middle Class Family.

The middle strata in a society present some problems in classification, and not all psychologists and sociologists employ the same category. Just below the upper class, described above, are those well-to-do families in which the father is usually a professional man or a business executive. The line between middle and upper-middle is not always clear-cut. Men in the higher administrative or sales positions, for example, tend to merge into the upper-middle class. As a matter of fact, while the middle stratum has some identifiable characteristics, the so-called middle-class way of life—as we shall see—has been greatly oversimplified. For all its written- about simplicity, the middle-class family is a veritable flexible. It looks different, depending upon the light and the angle, and no two people seem to see the same design. Middle-class people are more conscious of being in between than are any other group. They tend to emphasize the respectability of their jobs and their styles of life, for it is respectability that makes them superior to shiftless workers (Joseph, 1964). It is probably true that most middle-class workers, after a spell, realize that they will not move ahead. Clearly the clerical job, with its combination of rewards and frustrations, is central to an understanding of middle-class people. If the middle-class employee does not take to the idea of unionizing, he most certainly embraces other features such as the belief in education, a respect for hard work, and a near-fascination for the power of personality. The middle-class way of life is quietly satisfying; it suggests the accomplishment of moderate education and moderate occupational achievement, it brings a strong, stable, family-centered life; and in the smaller towns and cities, it brings a degree of public recognition as solid citizens.

The Lower Middle Class Family.

Just below the middle class is the large working class. Below the middle class, and occupying the bottom rung of the socio-economic ladder, is the lower middle class. These are the poor, and of late they have become the subject of much attention, both in a political sense and as a focus of sociological research. While we shall refer to the lower middle class from time to time, out primary concern here is with the lower class—the bottom rung. The lower-class person is well aware that he is on the bottom rung of the socio-economic ladder, and more important, he realizes that his position is less likely to change. This lack of upward mobility is even characteristic of the working class. In the Detroit Area Survey, it was found that "the hopelessness of mobility aspirations dawns rapidly as the years go by (Robert, 1960). In the Komarovsky study, Blue-Collar Marriage, a husband was asked; does your wife take an interest in your job?" He replied, "I don't take much interest in it myself so I wouldn't expect her to (Mirra, 1964). Husbands and wives in the lower middle class are at a loss to explain their position. On the whole, they do not consider the world a friendly or predictable place. They are wary of outsiders and tend to be suspect regarding the motivations of others. Uncertain and lacking self-confidence, lower-class individuals expect the worst to happen, and the chances are that it will. Most lower-class men and women have a genuine desire to assume the role of good family members. The men like to be considered to good husbands and fathers, and the women want to feel that they make dutiful wives and mothers. But—in the very nature of things—these roles are made difficult. The lower-class person, for example, is a poor planner. When he has money he is likely to spend it impulsively, shutting out thoughts of tomorrow. Because of this tendency to live each day for what it is, lower-class couples are likely to become involved in arguments and bickering. Predictably, rates of separation, desertion, and divorce are high among lower-class families. All things considered, it is little wonder the latter are the most disorganized families in the class structure.

Figure 3. Influences of Different Factors on Personality Development



Above figure shows how different factors influence the development of personality traits. Birth order, family size and SES are the main concerns of this research, but there are so many uncountable factors exist in the environments which have direct impact on personality development. Relation between family members, personality pattern of the parents, intelligence, institutions, parental attitudes, organ inferiority, illness, disability, gender confusion, social, economic and religious circumstances, etc are the examples of other factors.

REVIEW OF THE LITERATURE

Scientific study and application of Psychology started her journey in military during the World War- I, at United States of America. American psychologists had become busy with the mental measurement work of Alfred Binet. That time Alfred Binet was the famous psychologist in France. It was very difficult to incorporate millions of US civilian into military. That problem brought the tools of psychologist into military environment. The problem was also created the discipline of Military Psychology.

Dr. Robert M. Yerkes, President of American Psychological Association and his team developed different tools to meet the problem. Army Alpha and Beta tests were introduced for appropriate placement of new soldiers and officer training. It also served as the model of group test for both military and civilian applications.

Within very short period after entry, Psychologists worked with many other issues in military like: Selection related researches, troop morale, combat leadership, flying aptitude, emotional instability, measurement of human performance, etc. After the war, psychologists conducted surveys to assess the attitudes of soldiers, including their opinions about their own military service. Psychologists who contributed during World War- I, truly the first military psychologists—included such as Edwin G. Boring, James McKeen Cattell, G. Stanley Hall, Walter Dill Scott, Carl E. Seashore, Edward K. Strong, Lewis M. Terman, Edward L. Thorndike, John B. Watson, and Robert S. Woodworth.

There was a break in the study and practice of military psychology during the 1920s and 1930s, but when World War- II was started the military reestablished a psychological research program. Military psychology, born in the World War – I, matured in World War - II. Many new subject matters were added: military leadership, the effects of environmental factors on human performance and personality, military intelligence, psychological operations and

warfare, selection for special duties and the influences of personal background, attitudes, and the work group on soldiers.

Major Areas of work and study in military psychology are : Selection and Classification, Training, Human Factors Engineering, Environmental Factors, Leadership and Team Effectiveness, Individual and Group, Survey and Research, etc (Gal & Mangelsdorff, 1991).

Studies back to the early part of the 20th century have evidenced that personality traits are involved in leadership competence and behavior (Stogdill, 1948; Mann, 1959; Lord, De Vader & Alliger, 1986). Recently, this view has been supported by Judge & Bono (2000).

Blake & Mouton (1985) examined over 75 key components of followers' satisfaction. They found that trust and confidence in top leadership was the single most reliable predictor of followers' satisfaction in an organization. The study by Bruce J. Avolio, PhD, of University of Nebraska- Lincoln; Bernard M. Bass, PhD, of Binghamton University; Yair Berson, PhD, of Polytechnic University; and Doug I. Jung, PhD, of San Diego State University evaluated the effects of leaders' styles on 72 light infantry platoons in the U.S. Army. According to their study they looked at how leaders' approaches predicted the units' strength, unity and performance. A total of 1,594 soldiers rated their platoon leaders and sergeants on their transformational leadership. The soldiers also rated their leaders' transactional contingent reward leadership. Both leadership styles predicted platoon success in terms of cohesion in pulling together to get a job done and potency in solving difficult and unexpected problems. However, the platoons with passive leaders, who waited for problems to arise before correcting them, tended to have poorer cohesion and potency. Researchers evaluated the platoons in 11 tactical mission exercises, including defense, movement to contact and attack. They had 126 expert military observers determine how well the platoons accomplished their missions. Then they

examined the relationship between the platoons' performance and their leaders' styles, both of these styles were found equally important for military.

Leadership effectiveness can be predicted by two leadership behavior dimensions, that is, task-oriented and relations-oriented behavior. Research findings suggest that individuals scoring high on both dimensions perform better as leaders (Blake and Mouton, 1964). According to the contingency approach, proposed by Fiedler (1967), ideal leadership behavior profiles vary with the characteristics of the context.

Ekvall and Arvonen (1991, 1994) have suggested a third behavior dimension that is Change/Development, finding that high scores on all three dimensions predicted high performance regardless of the situation.

Behavior styles have been elaborated into constructs, such as charismatic, transactional, transformational and visionary leadership (Nystedt, 1997).

Regarding personality development, scientific interest on birth order began with Freud. According to the Freud, position in the sequence of brothers and sisters is of very great significance for the course of his later life. Adler emphasized that each position provides a predictable personality patterns. Alfred Adler (1870-1937), an Austrian psychiatrist, and a contemporary of Sigmund Freud and Gustav Jung, included birth order dynamics in his theory of personality formation. Also referred to as family constellation, one's birth order position often (but not always) can leave an indelible impression on the individual's style of life (habitual way of dealing with the tasks of friendship, love, and work). Other factors that may be equally influential are: parental attitudes; organ inferiority, illness, and disability; gender confusion; or social, economic and religious circumstances. Any overburdening factor may intensify normal inferiority feelings and lead to unconscious compensations or over-compensations (i.e., an extremely talented older or younger sibling). Other birth

order factors that should be considered are: the spacing in years between siblings; the total number of children and the changing circumstances of the parents over time. Adler suggested that birth order does not cause any direction of personality development, but it may be used by the individual as a building brick for his/her freely chosen style of life and fictional final goal. Many researchers, attempted to prove or disprove the sole effects of birth order, cite the complexity of other influences. Yuko (2008) investigated that what mothers become awareness of changes of interactions with firstborn child after having second-born child and what they have as strategies for making interactions with firstborn children. Most mothers reported that was difficult for maintaining same interaction with first born child as before having second-child. In the case of reporting guilt feeling with first-born child for changing interactions with them, mothers' guilty related to a notion of equality between siblings. And purposeful bringing firstborn child into caretaking for second-born child which is one of mothers' strategies in their childrearing promoted new interactions mothers and firstborn children. Thus new interaction makes a first more matured and responsible.

Since 1970, probably the most celebrated theory to explain why first borns may be more intelligent than later borns is the confluence model of Zajonc (2001). This states that because firstborns only have adult company about them in their early years, they will spend the initial years of their life interacting on a high intellectual plane. Note well that this will also go for siblings who, although objectively, later born, have a sibling at least five years senior with no siblings in between (technically, these children are considered to be "functional firstborns"). The theory states that firstborns will be more intelligent on the whole than only children, because the latter will not benefit from the "tutor effect" (i.e. teaching younger siblings). Zajonc's theory has been much criticized, especially confounding birth order with both age and family size, and alternative

theories (such as Resource Depletion Theory) have been offered to explain the Belmont and Marolla findings (Belmont & Marolla, 1973).

The first born child will receive the expectations of his or her parents. Because of this, many firstborns are in danger of acquiring perfectionistic or people-pleasing behaviors. On a more optimistic note, proponents of birth-order theory state that firstborns tend to be quite confident, controlling, diligent and mature. Not all firstborns are over-achievers, but even the most laid-back firstborn is clearly guided by a need to do the right thing and strives to make a difference in society. Firstborns can also become un- calm in hectic situations, and tend to "freak out" very easily (Belmont & Marolla, 1973).

Middle born children have been found a diverse range of personalities in different studies. The habits of many middle born are motivated by the fact that they have never been truly in the spotlight (Harris, 2006). The first-born always seems to be achieving and pioneering ahead, while the younger sibling is secure in his or her niche as the entertainer of the family. The middle born child may develop great social skills and have an easier time growing up with the other-centered point of view. The middle child knows what he or she is doing and tends to become very intelligent in their efforts to gain attention from siblings. Middle born children are usually quite talented, and their quest for perfection against their siblings can lead them to discover new and unlooked-for qualities, musically, academically, and theoretically (Belmont & Marolla, 1973). It has been suggested that middle born children are more likely to be entrepreneurs. Bill Gates is a well known middle born entrepreneur.

The names given to the youngest child is revealing: the youngest child of the family is viewed as the party animal, the entertainer who is unafraid to test his or her luck. While this is certainly not true of all youngest siblings, proponents of this theory state that the baby of the family is an endearing, delightful friend if not too self-centered (Belmont & Marolla, 1973).

Scholarly interest in the relationship between birth order and extraordinary achievement can be traced to 1874 when Francis Galton published *English Men of Science: Their Nature and Nurture*. This book chronicled the lives of 180 eminent men from various scientific fields. Galton was able to collect birth order data from 99 of his subjects, revealing that 48% of them were firstborn sons (Note: Galton did not count female children when reporting his results. Theoretically, a subject could be counted as a "first born" even if he was the 10th child, providing that his 9 older siblings were female).

Interest in birth order and eminence has continued unabated, and countless studies have confirmed Galton's conclusion: Firstborn children are overrepresented among Nobel Prize winners (Clark & Rice, 1982) classical music composers (Schubert, Wagner & Schubert, 1977) and prominent psychologists (Terry, 1989). Indeed, a study of 314 eminent 20th century personalities found that 46% of them were firstborn children (Goertzel, Goertzel, & Goertzel, 1978; Simonton, 1984/1999 and Simonton, 1999).

Different studies showed correlation between firstborn status and eminence is probably limited to certain types of scientific achievement. Later born children are more likely to become revolutionary leaders and scientists, and they may in fact be more creative than their firstborn siblings (Sulloway, 1996; 1999; Simonton, 1984/1999, 1999).

Intelligence is such a single factor of the individual, which interacts with different traits of personality. Research evidences found intellectual abilities are influenced by the birth order and family size. In 1973 Lillian Belmont and Francis Marolla published family size, birth order and intelligence test (Dutch version of the Raven Progressive Matrices) data from nearly the entire population of 19 year-old Dutch men (386,114 subjects). Belmont and Marolla found children from large families tend to make poorer showings on intelligence tests and on educational measures, even when social class is controlled. Within each family

size firstborns always scored better on the Raven than did later borns and with few inconsistencies, there was a gradient of declining scores with rising birth order, so that firstborns scored better than second borns, who in turn scored better than third borns, and so forth. In general, as family size increased, there was a decrease in Raven performance within any particular birth order position." For example, a third born born child from a 3-child family would be expected to score higher than a third born child from a 4-child family. A third born child from a 5-child family would be expected to score even lower, and so on.

On the other hand longitudinal studies, which track individual families over time, usually demonstrate that there is no relationship between birth order and IQ (Berbaum & Moreland, 1980; Retherford & Sewell, 1991; Rodgers, et al., 2000; Schooler, 1972). However, the tendency for large families to produce lower IQ children holds regardless of the research approach (Rodgers, et al., 2000).

Norway National Institute of Occupational Health and Norwegian Armed Forces Medical Service have jointly conducted a research and established the IQ of first borns is usually higher than other borns (Daily Amar-Desh, 2007). The IQ of 241,310 military personnel was measured from year 1967 to 1976. The result shows that average IQ of first born, second born and third born are 103.2, 101.2 and 100 respectively. It was also found that the IQ of second born gets higher if first born dies before adolescence.

Not all research findings were in the favor of first born. According to Shrader & Leventhly (1968) first born and middle born creates more problem for their parents than other born. Helson (1968) explained the whole achievement is greater among first than later borns in the same family. Another study shows those first and last born children are more self-centered, selfish and bossy (Hendershot, 1969) .

Concerning family size, one study shows family friction tends to be high in family of four or more children than two or three children (Dybwad, 1959). Only one child in a family shows unsocial attitudes at the very beginning of school life (Messer, 1968).

On the other hand leadership qualities are basically combination of few specific personality traits, influenced by the family environment. Regarding the development of moral sense, earlier born children have been found a bit deviated. Richard (2000) claims that the percentage of homosexual tendency is higher in older brothers than others. Each older brother increases the odds of homosexual by 40%. The younger member of the family can observe the behaviour of older siblings and gets the opportunity to modify his/her own drawbacks. Younger member knows it very well that which behaviours of his elder brother were positively reinforced by the parents. It has been established the probability that a man is homosexual is negatively related to his number of brothers in western settings (William, 2004). Basing on these two studies it can be told that other then first born, large family siblings possess favourable environment to grow up.

The comprehension level and language skill of a child are influenced by birth order and sex. In a study (Berglund, et al, 2005) Communicative skills, defined as gestures, vocabulary comprehension and vocabulary production, was examined as a function of gender, birth order, childcare and socioeconomic status (SES) in 1,019 18-month-old children. The children were recruited at their regular check-up at a number of randomly selected Child Health Care centers in a Swedish county. The participation rate was 88%. The children were assessed by their mothers using a short version of the Swedish Early Communicative Development Inventories. The results demonstrate significant effects of gender and birth order on vocabulary comprehension and vocabulary production. Girls scored higher than boys and first-born children scored higher than later-born children. Type of childcare (family care, care at home and day-care centers)

interacted with gender and birth order on vocabulary production and indicated that family care is not as advantageous as care at home or at day-care centers. SES had no effect on children's communicative skills at this age.

Not only psychological but physiological phenomenon was found influenced by birth order. A study (Garza & Ruth, 1994) examined the relation between epilepsy and birth order, using data on 1,950 subjects with epilepsy and 4,636 of their full siblings without epilepsy from the Epilepsy Family Study of Columbia University. The proportion of first-born individuals appeared to be higher among subjects with epilepsy than among their unaffected siblings.

Not all researches regarding birth order and family size supported that the factors of family have an impact on personality. Most people believe that learning to get along (or not get along) with their siblings played an important role in shaping their personality, and that their position in the family—oldest, youngest, or in the middle—had lasting effects. The contradiction can be resolved by taking into account the context-specific nature of learned behavior. There is abundant evidence that people do not automatically transfer behavior from one context to another: They wait until they have evidence that what they learned in Context 1 will also be useful in Context 2. Because patterns of behavior acquired in the family of origin tend to be useless or inappropriate in other settings, birth order effects show up only in that context. Outside the family they grew up in, firstborns and later-borns are indistinguishable in personality (Harris, 2000).

The impact of birth order and sibling interaction is also found in political settings. One study (Andeweg & Steef, 2003) concluded that despite mounting evidence that first-born children are overrepresented among incumbents in political office, there is no consensus about the cause of this overrepresentation. Some stress the impact of differential parenting, arguing that the first-born receive a larger share of parental resources and have a greater need to live up to

parental expectations. Others emphasize the interaction among siblings, arguing that first-born children are better prepared for power struggles, having experience both as followers and as leaders within the family. This study, using birth-order data for nearly 1,200 incumbents in various offices in local and national politics in the Netherlands, found more support for the parental impact perspective. Singletons were also overrepresented among incumbents, whereas middle-born children were underrepresented. The data suggest that this birth-order effect is weaker among younger generations and is more pronounced among women.

It has been also found that the impact of family environment on personality traits differ trait by trait (Livesley et al, 1993). The interactions within siblings create bondage within family. A positive correlation exists between this interactions and family size. The interactions between siblings may differ in different stages of life. Using pooled time series analysis (Lynn, 2001) on approximately 9,000 individuals ages 16–85 interviewed in the 1987–1988 and 1992–1994 waves of the National Survey of Families and Households (NSFH), this research examines change in 4 behavioral measures of sibling relationships—proximity, contact, giving help, and receiving help—over the life course. All four measures of sibling relationship decline significantly during early adulthood, but proximity and contact stabilize in middle age and do not decline further, whereas sibling exchange demonstrates a slight rise after approximately age 70. Life course analyses provide only modest support for a model in which siblings substitute for parents, spouses, and children. With the partial exception of proximity, measured life course changes do not explain observed age effects.

It is very difficult to identify ideal family size as the effect on personality is concerned. Conditions for personal growth and development may be more favorable for some aspects in smaller families and for others in large families (Tuckman and Regan, 1967).

The two common stereotypes regarding the only child are unfavorable. According to the first, he/she is a spoiled brat, selfish, egocentric, and antisocial. In the Second he/she belongs to that category of people known as sensitive, withdrawn, dependent on others and generally unsocial. The unfavorable traditional beliefs about only children were corroborated by early scientific studies. G. Stanley Hall wrote in 1907 "Being an only child is a disease in itself. The only child is greatly handicapped. He cannot be expected to go through life with the same capacity for adjustment that the child reared in the family with other children has" (Hall, 1907).

More recent studies agreed that the only child develops a distinctive personality pattern. This is often called the "only-child syndrome." However, there is ample evidence that the kind of personality pattern the only child develops, even though distinctive, has many characteristics that lead to good personal and social adjustment (Aldous, 1967; Burke, 1956; Tuckman and Regan, 1967).

Among the favorable characteristics of the only-child syndrome is maturity of behavior, especially control over the emotions. This is due to constant contact with adults and imitation of adult behavior patterns. Since only children are spared the rivalries, name calling, and conflicts so characteristic of families with several children, they do not develop jealousies and envies, nor are they made to feel inadequate by constant comparison with siblings (Aldous, 1967; Tolchin, 1959).

Like the favorable personality characteristics the only child develops, his unfavorable characteristics are a product of the home environment. Many only children are lonely in the sense that they lack companionship with their peers and the opportunity to play with other children. They are overexposed to adults and underexposed to children. Underexposure to peers encourages them to feel

cheated of what their peers have, with the result that they become envious and jealous of those who have siblings.

The loneliness of only children encourages the habit of daydreaming, which usually weakens their motivation to achieve what they are capable of achieving and almost always makes social adjustments difficult. Deprived of opportunities to learn to get along with real people at the preschool age when their peers are learning social skills, they seem unsocial to their peers later when they have opportunities for companionship (Messer, 1968).

An adult-oriented child becomes a dependent person, both physically and emotionally. He tends to lack self-confidence in his abilities because he is constantly, measuring himself against adults instead of against his peers. As the comparison is rarely in his favor, he is likely to develop feelings of inadequacy.

A small family is usually considered as one that has two children. Family planning society of Bangladesh inspires the citizen of the country to have one or two children and not more than that. The government service and even some of the multinational companies in Bangladesh provide facilities (maternal / paternal leave during pregnancy, extra wage or gift at the time of child's birth, free medical facilities, etc) to their employs only for first and second child. Most small families are planned families insofar as the number of children, the timing of the arrival of the first child, and the spacing of subsequent children are concerned. Since the children are wanted, the parent-child relationship is usually warm and wholesome. This contributes to a healthy home climate. In a small family, democratic control usually prevails, permitting each family member to develop his own interests and talents and thus encouraging creativity and individuality.

Most small families are economically secure enough to give all children opportunities to prepare themselves for adult life, though the firstborn as was discussed earlier often gets most of these advantages. However, as few parents

can provide advantages for their children without personal sacrifice. Parents of small families tend to put great pressure on their children and accuse them of not being appreciative if they fail to live up to parental expectations. As the number of sibling increases in the family, there are fewer opportunities to for parents to interact individually (Sarafino & Armstrong, 1980). Parents of smaller families tend to be warmly involved with each child and sensitive to individual needs (Bossard and Boll, 1960).

In a small family, parents can devote enough time to the care and guidance of each child to ensure that failures will be kept to a minimum. This builds up self-confidence and self-assurance and eliminates the feelings of inadequacy that come when a child is left to meet his problems alone. Unlike the only child, every child in a small family can count on having someone to be with whose interests are similar to his and even though sometimes his relationships with his siblings may be frictional, he learns to compete as wall as to cooperate with age-mates. This helps him to adjust to social situations outside the home and leads to a self confidence which the only child lacks.

In spite of the many conditions that fever the development of desirable personality characteristics in the small family, the child must pay the pries for this in the form of problem-creating circumstances (Bossard and Boll, 1966). Perhaps the chief of these is the competition for parental attention, affection, and approval.

If children in a small family are spaced several years apart, parents are able to give each child enough attention and help to encourage him to be dependent. In spite of the unfavorable traits that customarily develop in children who grow up in a small family, the favorable outweigh the unfavorable more than they do in the case of the only child. As a result, the personality pattern molded by a small family environment will, typically, favor better personal and social adjustments. Zajonc and Markus (1975) suggested that the reason for this

relationship lays in family interactions patterns. In small families children may receive a lot of personalized attention and varied learning experiences form relatively sophisticated teachers, namely, their parents. But as other siblings are added to the home environment, the overall intellectual quality of the home may decline. This is because each child now has fewer verbal exchanges with adults (superior teachers) and more interactions with other siblings who are relatively inferior as teachers.

The home climate of the small family may not be as pleasant for parents and other relatives as that of a one-child family. But there are compensations. Parents experience greater feelings of usefulness and a greater challenge to try to understand each child, to help him develop his individual abilities, and to see that each feels loved and wanted so that none will be psychologically damaged by suspicions of parental favoritism.

The feeling of being useful to her family is as ego-satisfying to the mother as the feeling of being able to provide several children with opportunities to develop their interests and abilities is to the father. For both parents, having several children who measure up to their expectations is more ego-satisfying than having just one do so. Furthermore, the chances of having one child measure up to parental expectations are greater in the small family than in the one-child family where all depends on one child.

Large Families are usually to be more common in the lower than in the middle and upper socioeconomic groups. Thus, some of the unfavorable personality effects reported to be associated with large families may be due to socioeconomic factors. Furthermore, as having a large number of children is often unplanned for and unwanted, parental attitudes tend to be less favorable in large than in smaller families. This influences the home climate, and through it, indirectly, the personality pattern of every family member.

In a large family, parents have too little time to overprotect or indulge any child. Children therefore learn to be independent and mature in their behavior at an earlier age than in smaller families. If all the work entailed in bringing up a large family is to be done, every child must learn at an early age to be cooperative and to carry his share of the load. The child who grows up in a large family never has to be lonely. And with a number of siblings to choose from, he can usually find at least one who is congenial and companionable. As a result, he learns to be social and to enjoy social activities (Hurlock, 1979).

Unless the family income is high, children who grow up in a large family are of necessity deprived of many of the material possessions and social and educational advantages their peers have. This gives rise to jealousies and envies which often foster the development of a martyr complex. Parents may, through severe personal privation, provide the children with the opportunities that their peers have, but if the children do not take full advantage of these opportunities adequate appreciation, their parents are like make them feel guilty and ashamed. As family size increases, the attitudes and behavior of parents change. These parents tend to be less warm, spend less time with each child, and use power assertive techniques for discipline. As the parents' work load around the house increases, they do not have as much time to reason with each child. Child care responsibilities in large families often fall on older siblings who have neither the skills not the inclination to use reason when a child miss behaves (Bossard and Boll, 1960).

It was found that lack of adequate supervision and guidance, especially when the mother must work to help meet family needs, leads to undisciplined behavior in school, antisocial behavior outside of school, and personality maladjustments. The problem is greater for children from large families than for those from smaller families. Consequently, children who grow up in large families tend to make poorer personal and social adjustments (Hurlock, 1979).

How having a large number of children affects the personalities of parents depends largely upon how, they feel about the size of the family, whether they wanted a large family and planned for it. In general the personality effects are likely to be unfavorable. Both parents feel overworked and deprived of the material possessions and opportunities for recreation that their friends with smaller families enjoy. While they may not feel martyred, they often envy friends who have fewer home duties and responsibilities.

Living under a constant threat of economic in security makes parents anxious and fearful. Under, such conditions, it is difficult to be relaxed and happy or to create a healthy, rewarding home climate. Consequently, the problems that are normal in a large family are intensified and the emotional strain becomes overwhelming. Large families are likely to overtax the physical and emotional strength of parents (Stockle, 1954).

Several studies have found that as family size increases, the intellectual level of the children declines (Belmont & Marolla, 1973; Kellaghan & MacNamara, 1972; Zajonc, 1976). Although this decline may be related to other factors such as lower socio-economic status of many larger families, statistical methods can be used to balance socio economic differences. When this is done, family size is still related to cognitive performance (Zajonc, 1976).

In spite of variations in home conditions that influence the amount of friction, the traditional belief about the relationship between family size and family friction is usually correct. Family friction tends to be stronger and more persistent in families of four or more members than in those of only two or three members (Bossard and Boll, 1966; Dybwad, 1959; Farber and Blackman, 1956).

A host of research studies indicate that the lower-class family is reluctant to participate in community or social activities. In one of the pioneering surveys, conducted during the mid-1920's, the Lynds discovered that in Middletown 47 per cent of the lower class had no intimate friends, in contrast to only 16 per

cent of the upper class (Robert,et.al, 1929). Fairly similar findings were reported by Komarovsky in a study done some 40 years later (Mirra, et.al, 1964). In the well-known Yankee City survey, Warner and Lunt report that "as the position of a class decreases, the percentage of those who belong to association decreases (Lloyd, et.al, 1941)." Reissman states that "regardless of the variable used to measure class position—occupation, income, or education—the higher class shows a higher degree of participation and involvement in the community. That is, individuals in this class read more books and magazines, attend church more frequently, belong to more organizations, and more of tern hold office in these organizations (Leonard, 1954)." In the widely read *Workingman's Wife*, published in the 1960's, the authors report that lower-class wives "have difficulty feeling themselves to be full-fledged members of the wider society (Lee, et.al, 1962). A comparative analysis of marital sexuality among the lower classes in England, Mexico, Puerto Rico, and the United States revealed that sex adjustment was generally poor. It was found, for instance, that wives tended to have a negative attitude toward sex, and that both husbands and wives were likely to feel that "sex is a man's pleasure and a women's duty." This pattern of husband and wife "separateness" has been found over and over again in studies of the lower class. Socioeconomic inequality affects the auto-perception of psychological characteristics, suggesting the existence of a psychological gap (María, 2008). For this purpose, a questionnaire was applied annually to 1500 persons living in different urban areas of Argentina from 2004 to 2007 (panel study). Brief versions of tests were included in order to assess locus of control, personal projects, psychological distress and verbal comprehension. The results show significant differences between the people belonging to lower classes and the people belonging to the upper classes. Lower classes possessed less control in locus of control, personal projects, psychological distress and in verbal comprehension.

Children represent something of a special problem in lower-class families. For one thing, the birth rate is noticeably higher than in the upper classes. Birth control—be it the rhythm method or the use of clinical devices—is imperfectly understood by many lower-class couples. In a survey of available date, Jaffe reports that "in 1962, 34 percent of the families with five children, and 44 per cent of those with six, had income below $4,000 per year. The family's study shows that one out of five couples with children have excess fertility, defined as those whose last child was unwanted by either husband or wife. Not surprisingly, the study found that 'the problem of unwanted pregnancies is most severe in the lower income and education groups (Frederick, 1964). In addition to the lower-class economic problem, aggravated by large numbers of children, the latter are frequently involved in scholastic difficulties. Lower-class boys and girls do not find it easy to accept the middle-class values purveyed by the school system. Troubled, perhaps, by poor grades or conduct problems, these youths too often become the drop-outs. Sooner or later, it is the lower-class juvenile who is most likely to run afoul of the law. It may or may not come as a surprise to learn—in view of the difficulties listed above—that physical punishment is much more common in lower-class families than in the higher strata. McKinley's survey disclosed that "in general, working-and lower-class families are more likely to punish for offenses, more likely to punish with ridicule or by inflicting pain." The punishment is evidently symptomatic of underlying tension between lower-class children and their father. The relationship between children and their grandparents may also be more tenuous in the lower-class family. In different studies by Cecil & Paul (1947) and Sydney & Peter (1965), lower-class youth were found to be much less familiar with their grandfathers. Boys and girls in the latter group undoubtedly have problems—as do youngsters in all cultures—but clearly, in our own society it is the lower-class youth who are likely to have difficulties of the most extreme type. Consistently, it has been found that lower socioeconomic status (SES) is related to worse health (Ina, 2008).

Although it is obvious that the upper stratum is the moneyed class, it is pride in family name rather than wealth which is their hallmark. Class or caste, the upper stratum perpetuates itself through a vast kin network. Significantly, it is difficult for an outsider to comprehend the kinship system, embodying as it does nuclear units interlocked through blood ties, marriage, and joint ownership of property. Cousins, uncles, aunts, siblings, in – laws, nieces and nephews, parents and grandparents – all combine to form and imposing range of familiarity. This upper class range is solidified not only through extensive business and personal relationships but through a systematic encouragement of endogamous marriage. Geographically, the upper class tends to be stable, in contrast to the middle class. Whereas the middle class family head is likely to move several times in the course of his occupational carrier, the upper class male generally "Stays put". Children are compared to earlier members of the family, and expectations are established that these children will equal or surpass the feats of their ancestors. Admired personality traits of the ancestors are held before children in their impressionable years (Ruth, 1963).

A recent study shows linear relation between socioeconomic indicators and health behavior, health, and longevity (Linda, 2008). It reflects existence of suitable physical and psychological environment in higher SES. IQ and SES were also found correlated in this study.

Basic to an understanding of the upper-class way of life is the fact that (a) members are already firmly entrenched at the top of the social ladder; there is no striving for status; and (b) there are generally no financial problems. Since status and wealth (preferably inherited wealth) are taken for granted, there is no need for average living. Upper-class families live comfortably—very comfortably. Thus they live in large houses. They dress well. They may buy an expensive car, or they may not, depending on their mood or fancy. Upper-class families travel a great deal, both here and abroad. As Kahl notes, "The upper class in any local community is, relative to other strata, small and cohesive; it is an *organized*

social group, not merely a statistical category of similar people. In this sense it is qualitatively different from the other classes (Joseph, 1964).

One of the most ubiquitous findings of criminology has been that of consistent linkages between measures of socio-economic deprivation or disadvantage and elevated rates of crime (Rutter, Giller, & Hagell, 1998). These findings have been reported for many societies and have been replicated using a range of measures of socio-economic disadvantage, including measures of: income (Conger et al., 1992; Farrington, 1990); poverty (Kramer, 2000); socio-economic status (Dodge, Pettit, & Bates, 1994; Farrington, 1990; Sampson & Laub, 1993); and neighbourhood disadvantage (Kazempiur & Halli, 2000; Ludwig, Duncan, & Hirschfield, 2001). These theories have emphasized the ways in which patterns of maladaptive child rearing and supervision encourage the development of crime (Farrington, Barnes, & Lambert, 1996; Rowe & Farrington, 1997; Rutter et al., 1998).

Family environment is also the field of interest in clinical point of view. In order to clarify the influences of family environment on the development of personality traits (Nakao et al, 2000), 150 children (104 males and 46 females, mean age 13.2 ± 2.4 years) who had been interviewed at the Child Guidance Clinic in Osaka were investigated. From 13 behavioral characteristics (activity, talkativeness, sociability, social skills, rule-keeping, will, aggression, emotional control, imagination, anxiety, maturity, intelligence, and neuroticism), factor analysis identified three personality traits: extraversion, maturity, and intellect. The effects of family environment (maternal and paternal participation in child rearing before and after 4 years of age, child-rearing style, parental relationship, sibling relationship, number of siblings, birth order, and socioeconomic status) on these personality traits were examined based on a structural equation model. The results found, first, that extraversion was negatively associated with overprotection/interference and with maternal participation in child rearing. Maturity correlated with high socioeconomic status, appropriate child-rearing

style, and paternal participation in child rearing. Intellect was related to high socioeconomic status and maternal participation in child rearing. Second, path analysis with selected variables revealed that 8% of variance in extraversion, 14% in maturity, and 10% in intellect was due to family environment. Third, children with high introversion or high intellect had stronger influences from family environment than did those with high extraversion or low intellect.

Basically the environment created by the birth order, family size and socio economic status, influence development of personality of individuals. These parameters persuade some of the facilities which are very much required for progress of individual's overall development. A study (Razzaque et al, 2006) examines the relationship between family size and children's education in Bangladesh for two periods. 1982 with high fertility and 1996 with low fertility by using data from the Matlab Health and Demographic Surveillance System of the ICDDR,B: Centre for Health and Population Research. Children aged 8–17 years (27,448 in 1982 and 32,635 in 1996) were selected from households where the mother was aged 30–49 years and the father was the head of household. Children's education was measured in terms of completed years of schooling: at least class 1 (among 8–17 year olds), at least class 5 (among 12–17 year olds) and at least class 7 (among 15–17 year olds). After controlling for all variables in the multivariate analyses, level of children's education was not found to be associated with family size during the high fertility period. The family size–education relationship became negative during the low fertility period. In both periods children of educated mothers from wealthier households and those who lived close to primary/high schools had more education, but this socioeconomic difference reduced substantially over time. Boys had more education than girls during the high fertility period but this difference disappeared during the low fertility period. As birth rates fall and the proportion of children from small families increase an increase in children's education is to be expected. This study reflects the importance of socio economic status on children's education. Family

size also played a vital role during low fertility period. Education is one of the important factors to develop the personality of an individual.

How much one individual would be interested and thereafter qualify for military also varies with birth order. A study was completed in February and March 2005 via http://www.surveymonkey.com/ survey generated by the Kate, B.S. of St. Cloud State University. The title of the study was "Birth Order Related to Members of the Military and their Spouses". The result of the survey shows 18 of 30 soldiers were first-borns (60%); 4 of 30 soldiers were second-born (13%); 5 of 30 soldiers were third-born (17%); 3 of 30 soldiers were fourth-born (10%). The statistics indicates a tendency of earlier born to join military, but level of significance was not estimated.

Sense of responsibility is one of the vital traits for military leadership. This specific trait is also been shaped by birth order. The oldest-born have been reported to take more internal responsibility for their actions (Falbo, 1981). Falbo theorized that oldest children had probably developed this sense of responsibility because they were more often put in charge. Similarly, Phillips and Phillips (1994) found that first born tends to attribute others' work performance to internal factors more so than later-borns. First-born weight lifters showed a more internal locus-of-control as well as a greater need for achievement than later-borns (Hall, Church, & Stone, 1980). Among alumni of a social work college, first-born males felt they had too much responsibility toward their families, whereas later-born males identified more with the role of the infantilized child (Lackie, 1984). Findings for females were similar. Other research also supports the idea that first-borns demonstrate more responsibility than later-borns (Hansson, Chernovetz, Jones, & Stortz, 1978; Howarth, 1980).

In contrast, Walter and Ziegler (1980) found middle-borns to have a more internal locus of control than first- or later-borns in families of three or more children. They also found last-borns in larger families to show a more external

locus of control than last-borns from smaller families. Harris and Morrow (1992) found that birth order had no effect on self-perception of responsibility. Kirkcaldy (1992), similarly, concluded that birth-order has no effect on the work attitudes of college students.

Sociability is also treated as an important military potential. It helps one military leader to make a good relation with subordinates and others. This cohesiveness helps to practice transformational leadership skill. The research on sociability and birth order concluded that last-borns were the most sociable (Segal, 1978) perhaps because they were not likely to win at competitions (due to their younger age and lower competency) and thus developed a more adaptive affiliative orientation. Singh (1985) reported that last-borns were more extroverted; sociability is a major component of extroversion. Kaur and Dheer (1982), on the other hand, found no effect of birth order on introversion/extroversion. Schneider (1981) found that only children had lower Social Interest Scale scores than first-, second-, or middle-borns with middle-borns scoring higher than younger borns. Falbo (1977) concluded that only children show less of a need for affiliation and exhibit more trusting interaction styles. This may be related to the lower affection deprivation experienced by only children.

Snow, Jacklin, and Maccoby, (1981) however, found that sociability, as well as assertiveness in frustrating situations, was highest in first-borns, and lowest in later-borns. Yet Bell et al. (1985) found that birth order had no effect on social competence. Others, similarly, found no differences in sociability between the birth categories, but found the oldest to be the dominant (Perlin & Grater, 1984; Phillips et al, 1988).

Research on aggression and exhibition found that last-borns scored highest on need exhibition while middle-borns scored highest on need aggression (Begum, Banu, Jahan, & Begum, 1981). First-borns, on the other hand,

scored lowest on both exhibition and aggression. Gender was also a factor here with need exhibition for first-borns and middle-borns being stronger with males than with females. For last-borns, need exhibition was stronger with females than with males.

A military leader must possess emotional stability. Without this particular characteristic, it will be difficult to cope with stressful situation. Emotional stability is essentially a measure of anxiety versus well being, where emotions are controlled rather than highly variable (Dyer, 1984). Eisenman (1992) concluded that first-borns are more fearful, and that some first-borns show more anxiety and creativity. These findings may be due to parents being more restrictive and anxious with first-borns as well as to first-borns having more time alone with their parents. Lee (2008) conducted a research on emotional intelligence (EI) in high school students using EI Scale to survey 2029 high school students of Taiwan. His results showed significant differences of EI among gender, birth order and age.

Kushnir (1978) found that birth-order differences in affiliation exist only in females and only in situations that produce higher anxiety in first-born than in later-born females. This finding suggests that the purpose of affiliation for first-born females is to reduce anxiety. Schachter (1959) concluded that first-born and only children become more anxious in anxiety-inducing situations than later-borns, and when anxious, are also more likely to seek company than later-borns.

Bloom, Anderson, and Hazaleus (1984) found that neither age spacing nor gender had an effect on anxiety or locus of control of first-borns in two-child families. Furthermore, Anantharman (1981) found no difference in the anxiety levels of first-borns and later-borns. However, Gates et al (1988) reported first-borns as having less trait anxiety with girls exhibiting more anxiety than did boys overall. Howarth (1981) replicated this finding. The assertion that the oldest in the family will be the most anxious because first-time parents are more anxious

themselves is not supported by these studies. Shanbhag (1990), however, found that first-borns were more anxious than both middle- and last-borns, and Kushnir (1978), while finding no birth order effect on trait anxiety, did conclude that first-born females may show higher state anxiety than later-born females.

Research on coping resources found that psychological birth order (the extent to which a person shows a set of characteristics shown by research to be associated with a certain birth order position) as measured by the White-Campbell Psychological Birth Order Inventory (PBOI) is related to the perception of coping resources in school-aged children (Pilkington, White, & Matheny, 1997). Psychologically oldest children perceived themselves as having more family support, peer acceptance, and social confidence whereas psychologically middle children scored lowest on these measures. The authors suggest that the lower self-esteem, higher frustration, and victimization of psychologically middle children limit the development or demonstration of coping resources. Research by Stewart & Campbell (1998) supports the construct validity of the PBOI as well as the concept of psychological birth order.

Regarding emotional stability, Kaur & Dheer (1982) found that middle-borns are more emotionally stable while first- and later-borns are more neurotic. Another study, however, found no birth order effect on neuroticism or extroversion (Shaughnessy, et al, 1990).

Self Esteem is such a quality that makes a leader more dynamic to maintain his confidence and dignity. In a meta-analysis, Falbo and Polit (1986) conducted an extensive review of only children and revealed that they surpassed the non-only group (all other birth orders combined) in achievement, psychological adjustment (low anxiety, high self-esteem, androgyny), character (leadership, autonomy) and intelligence. The research findings on the relationship between self-esteem and other birth categories have been contradictory. Rosenberg (1965) found that first borns had the highest self-

esteem within a predominantly Jewish, male sample. Coopersmith (1967), in a broader study of adolescent boys, found that first-born boys were overrepresented in the high self-esteem group. Kaplan (1970) found, however, that last-born males (white, high SES) were more likely to have higher self-esteem than middle, first-born, and only children. Other studies reported the trend of first-borns having higher self-esteem than last-borns (Falbo, 1981; Gates et al., 1988), especially with females (Schwab & Lundgren, 1978). Another study found that first-borns in two-child families had a more positive self-concept when the age gap between the two siblings was small (ten months to two years) (Bloom et al., 1984). Likewise, Howarth (1980) found that, in sibling pairs, the older showed more self-pride than the younger.

There are some interesting complex effects as well. Self-esteem was reported to be lower among middle-born males than among first-born and last-born males, but self-esteem was enhanced if all other siblings were female (Kidwell, 1982). Kidwell concluded that the middle-born male in this situation enjoyed a uniqueness and special treatment in the family. Lester, Eleftheriou and Peterson (1992) reported an interesting self-esteem finding moderated by sex; last-born females exhibited higher self-esteem while first-born males scored higher on this measure.

OBJECTIVE AND SIGNIFICANCE

The idea of the present research is basically an output of a casual observation of the researcher during his work at ISSB. The researcher observed that a good number of finally qualified candidates were first born, second highest were second born, third highest were third born and it continued up to sixth. Regarding the family size, it was observed that maximum numbers of selected candidates were from the families where numbers of siblings were two. The percentages of selected candidates were also found highest from the families with relatively high socio economic status.

The researcher then sorted out the data of first born who were not-qualified. The data indicated that those who were first born but not qualified were basically from single child family or from a family where the numbers of siblings are relatively higher. The researcher then again sorted out the data of first borns of large families but qualified by ISSB. This data showed existence of another common phenomenon, which was comparatively high socio economic status of families. Thus the above mentioned variables seemed inter linked. The findings of the casual observation have been partially supported by the different studies discussed earlier. Research findings have showed that first borns are in better position in different aspects (Zajonc, 2001; Clark & Rice, 1982; Schubert, Wagner & Schubert, 1977; Terry, 1989; Goertzel, Goertzel, & Goertzel, 1978; Simonton, 1984/1999; Simonton, 1999; Berglund, et al, 2005; Falbo, 1981; Phillips and Phillips, 1994; Hall, Church, & Stone, 1980; Lackie, 1984; Hansson, Chernovetz, Jones, & Stortz, 1978; Howarth, 1980; Pilkington, White, & Matheny, 1997; Rosenberg, 1965; Coopersmith, 1967; Falbo, 1981; Gates et al., 1988).

Only child of the families possess some limitations (Messer, 1968; Hall, 1907; Messer, 1968; Schneider, 1981; Falbo, 1977).

Family friction tends to be high in the large families (Dybwad, 1959; Sarafino & Armstrong, 1980; Bossard and Boll, 1960; Hurlock, 1979; Stockle,

1954; Belmont & Marolla, 1973; Kellaghan & MacNamara, 1972; Zajonc, 1976; Bossard and Boll, 1966; Dybwad, 1959; Farber and Blackman, 1956).

Children of small families get some advantages (Tuckman and Regan, 1967; Bossard and Boll, 1960; Zajonc and Markus, 1975).

Families with lower SES face some limitations (Robert,et.al, 1929; Mirra,et.al, 1964; Lloyd,et.al, 1941; Lee,et.al, 1962; Frederick, 1964; Cecil & Paul, 1947; Sydney & Peter, 1965; Ina, 2008; Rutter, Giller, & Hagell, 1998; Conger et al., 1992; Farrington, 1990; Kramer, 2000; Dodge, Pettit, & Bates, 1994; Farrington, 1990; Sampson & Laub, 1993; Kazempiur & Halli, 2000; Ludwig, Duncan, & Hirschfield, 2001; Farrington, Barnes, & Lambert, 1996; Rowe & Farrington, 1997; Rutter et al., 1998; Nakao et al, 2000).

Different opinions from different studies have been also observed. The findings of the casual observation and few basic theoretical orientations generated the following question:

"If the findings of the casual observation which had been supported by the theoretical framework, were not accidental, then what are the impacts of birth order, family size and socio economic status on the selection of the candidates ? "

The above mentioned question demanded a systematic and scientific study to answer. Thus the objectives of the present study had been set to determine the effects of birth order, family size and socio economic status on required traits of military leadership which has been termed as military leadership potentials in the present study. If no relation is established, then probably the findings of the casual observation were accidental. Otherwise it may provide a few comprehensive ideas related with the selection of potential leaders in military.

The prime objective of the present research is to find out the relation between military leadership potentials and three different aspects as birth order, family size and socio economic status. The selection of potential officers for military is very important which possesses long term effects. Selection of military officers possesses importance to predict a civilian in future military setting.

Inter Services Selection Board (ISSB) of Bangladesh is the only organization which selects future leaders of Bangladesh Army, Navy and Air Force. The prime task of ISSB is to assess military leadership potentials of the candidates. The accuracy depends on professional knowledge of assessment and experiences. The present research is expected to contribute ideas in the selection process by enhancing knowledge of assessment in the Bangladeshi perspectives. The findings will help the assessors of ISSB to tune their assessment system to a finer shape. ISSB, Services and in turn Bangladesh government is likely to be benefited through the knowledge of this present research as the best possible selection will provide a best possible military leader for the country and in turn it would help the nation in crisis.

HYPOTHESIS

The study has been designed as an approach to explore impact of few family factors on military leadership potentialities. Indirect effects of birth order influences individual's personality traits. The effect of birth order is indirect, because not the birth order but the environment created by the birth order influences personality. Research evidences also informed the importance of birth order, family size and socio economic status in molding internal family environment which in turn stimulates to develop personality. The following specific hypotheses have been formulated on the basis of existing literature and casual observations.

H_1 First born Ss would possess significantly better military leadership potentials than other born.

H_2 Ss of Small families (2 children) would maintain significantly better military leadership potentials.

H_3 Ss of upper middle socio-economic status would possess significantly better military leadership potentials.

VARIABLES

The following variables have been set in the present study.

Independent Variables

(1) Birth order (Consists of three levels)

- **i.** First Born (The oldest child of the family)
- **ii.** Middle Born (The child who has at least one younger and one elder sibling)
- **iii.** Last Born (The youngest child of the family)

(2) Family Size (Consists of three levels)

- **i.** Single Child (Individual who has parents but no sibling)
- **ii.** Two Children (Individual who has parents and one sibling)
- **iii.** More Than Two Children (Individual who has parents and more than one siblings)

(3) Socio-economic status (consists of three levels)

- **i.** Lower Middle Class (Individuals from Lower Middle Class families)
- **ii.** Middle Class (Individuals from Middle Class families)
- **iii.** Upper Middle Class (Individuals from Upper Middle Class families)

Dependent Variables

(1) Military leadership potentials.

CHAPTER - II

METHOD

METHOD AND PROCEDURE

SAMPLE

Background of sample setting

The sample of the study has been collected from Inter Services Selection Board (ISSB) with the permission of the concerned authority. The male candidates from different socio-economic status, family structure and different areas of Bangladesh approach ISSB for selection in the Armed Forces. The number of candidates was taken in each board was around 20 by following simple random sampling. The data had been collected from summer and winter session of the year 2005.

Rationale of using ISSB samples

The candidates of ISSB had been preferred as sample for the following reasons:

a. ISSB is the door to military environment in Bangladesh. All military leaders of the country must go through ISSB before joining armed forces. Therefore, the candidates of ISSB hold highest probability to become a military leader.

b. The candidates of ISSB are not forced, rather they are self motivated to join armed forces. Therefore, some of the intervening variables (level of motivation, persistency, interest, etc) could be controlled.

c. Homogeneous sample as per age, educational qualification, and intelligence (low scored candidates in intelligence test were initially screened out at ISSB).

d. People from across the country attend ISSB. Therefore, the researcher got provision to pay economic afford in collecting samples.

e. It would be helpful to use knowledge of the research in selection process of ISSB without having any check and balance.

Group wise sample distribution

The group wise sample has been shown below:

Table 2. Division Wise Sample Distribution

	Sample		All Appeared Candidates of Summer and Winter (2005)	
Division	Frequency	Percentage	Frequency	Percentage
Dhaka	191	26.60	692	28.01
Chittagong	144	20.05	534	21.60
Rajshahi	157	21.87	493	19.95
Khulna	110	15.32	361	14.59
Barishal	72	10.03	269	10.90
Sylhet	44	06.13	123	04.95
Total	718	100.00	2472	100.00

Above table shows division wise sample distribution along with all appeared candidate of summer and winter session, 2005. Division wise proportion of samples, which has been drawn by using Simple Random Sampling, had been found close to the available proportion in the population.

Table 3. Birth Order Wise Sample Distribution

Birth Order

		Frequency	Percent
Valid	First Born	287	40.0
	Middle Born	251	35.0
	Last Born	180	25.1
	Total	718	100.0

Table 4. Family Size Wise Sample Distribution

Family Size

		Frequency	Percent
Valid	Single Child	46	6.4
	Two Children	311	43.3
	More than Two Children	361	50.3
	Total	718	100.0

Table 5. SES Wise Sample Distribution

Socio Economic Status

		Frequency	Percent
Valid	Lower Middle Class	178	24.8
	Middle Class	447	62.3
	Upper Middle Class	93	13.0
	Total	718	100.0

Table 6. Cross Tabulation of Birth Order-Family Size-Socio Economic Status

Socio Economic Status			Family Size			Total
			Single Child	Two Children	More than Two Children	
Lower Middle Class	Birth Order	First Born	8	32	17	57
			14.0%	56.1%	29.8%	100.0%
		Middle Born			86	86
					100.0%	100.0%
		Last Born		27	8	35
				77.1%	22.9%	100.0%
	Total		8	59	111	178
			4.5%	33.1%	62.4%	100.0%
Middle Class	Birth Order	First Born	36	127	59	222
			16.2%	57.2%	26.6%	100.0%
		Middle Born			138	138
					100.0%	100.0%
		Last Born		70	17	87
				80.5%	19.5%	100.0%
	Total		36	197	214	447
			8.1%	44.1%	47.9%	100.0%
Upper Middle Class	Birth Order	First Born	2	5	1	8
			25.0%	62.5%	12.5%	100.0%
		Middle Born			27	27
					100.0%	100.0%
		Last Born		50	8	58
				86.2%	13.8%	100.0%
	Total		2	55	36	93
			2.2%	59.1%	38.7%	100.0%

INSTRUMENTS

The Bengali version of Gordon Personal Profile (GPP) and Gordon Personal Inventory (GPI) were administered to measure military leadership potentials in the present study (see Appendix - C). Positive and significant Product Moment Correlation and Coefficient was established between English and Bengali version of Gordon Personal Profile and Gordon Personal Inventory (Dutta, 1979). Gordon Personal Profile (GPP) measures four traits of personality. Gordon has defined (Gordon, 1963) these four traits which are as follows:

a. **Ascendancy**. Those individuals who are verbally ascendant, who adopt an active role in the group, who are self-assured and assertive in relationships with others and who tend to make independent decision, score high on this scale. Those who play a passive role in the group, who listen rather than talk, who lack self confidence, who let others take the lead, and who tend to be overly dependent on others for advice, normally make low scores.

b. **Responsibility**. Individuals who are able to stick to any job assigned them, who are preserving and determined, and who can be relied on, score high on this scale. Individuals who are unable to stick to the task that do not interest them and who tend to be irresponsible, usually make low score.

c. **Emotional Stability.** High score on this scale are generally made by individuals who are well-balanced, emotionally stable and relatively free from anxiety and tension. Low scores are associated with excessive anxiety, hypersensitivity and nervousness. Generally, a very low score reflects poor emotional balance.

d. **Sociability**. High scores are made by individuals who like to be with, share with people and who are social. Low scores reflect a lack of gregariousness, a general restriction in social contacts, in extreme, an actual avoidance of social relationship.

Gordon Personal Inventory (GPI) measures following aspects:

a. **Cautiousness**. Individuals who are highly cautious, who considers matters very carefully before making decision and do not like to take chances or risks, score high on this scale. Those who are impulsive, act on the spur on the moment, make hurried or snap decision, enjoy taking chances and seek excitement low on this scale.

b. **Original Thinking**. High scoring individuals like to work on difficult problems, are intellectually curious, enjoy thought provoking questions and discussion, like to think about new ideas. Low scoring individuals dislike working on difficult or complicated problems, do not care about accruing knowledge and are not interested in thought provoking questions or discussions.

c. **Personal Relation.** High scores are made by those individuals who have great faith and trust in people, and are tolerant, patient and understanding. Low scores reflect a lack of trust and confidence in people and a tendency to be critical and to become annoyed or irritated what others do.

d. **Vigour**. High scores on this scale characterized individuals who are vigours and energetic, who likes to work and move rapidly, and who are able to accomplish more than the average person. Low scores are associated with low vitality or energy level, a

preference for betting a slow pace, and a tendency to tire easily and be below average in productivity.

SCORING

Items of Gordon Personal Profile and Gordon Personal Inventory were presented in clusters. Each cluster contained four statements, representing four different traits. The subjects had to select one statement from each cluster, which was "most" relevant with his personality. After selecting "most" relevant statement, the subjects had to select another from rest of the statements which was "least" relevant with his personality pattern. The statements which had been marked as "most", received a weight of 2, if unmarked a weight of 1 and if marked "least" a weight of 0 (zero). The scoring stencil had been cut so as to automatically provide these weights.

VALIDITY AND RELIABILITY

Pioneer Versions:

Gordon Personal Profile measures four traits of personality. The traits are ascendancy, responsibility, emotional stability and sociability. The validity of Gordon Personal Profile was concerned with the correlation between each scale score of the respondents (55 males and 63 females) and rating by the people who possess adequate acquaintance with the respondent. Significant positive correlations were obtained between scores and ratings made on these four profile traits (Gordon, 1963).

Bass and Bernard (1957) administered the Gordon Personal Profile and Ohio State Leader Behaviour Description Questionnaire (LBDQ) on top level supervisors. Significant positive correlation was found in measuring ascendancy

of Gordon Personal Profile and LBDQ. However, correlation between LBDQ and other traits of Gordon Personal Profile were found positive but not significant.

Estimates of internal consistency and stability of Gordon Personal Profile has been revealed. Split-half reliability with 140 college students, Test-retest (one weak interval) with 48 college students, Test-retest (3 month interval) with 88 high school students was conducted. The result showed significant correlation between the scores of the traits.

The validity of Gordon Personal Inventory was investigated in a number of studies. One study, reported and made by Toorenaar (1963) in which 200 salesman were selected, who posses scores on the basis of rated performance. These salesmen had been tested with the Gordon Personal Inventory from one to three years previously. Correlation between inventory scores and rated performance were found significant at 0.05 level on Original Thinking, Personal Relations and Vigour.

Reliability data for Gordon Personal Inventory scales revealed split-half reliabilities (one was with 168 college students and another with 124 college students). In all these studies, correlations were found positive and significant at 0.01 level.

Gordon Personal Profile and Gordon Personal Inventory, taken together or separately, has been found to have applications in selection, appraisal, vocational guidance, personal counseling, class room demonstration and basic research. Rusmore (1956) administered Gordon Personal Profile to 81 College students and Gordon Personal Inventory to 56 college students under simulated employment conditions. One week later the students were retested under simulated guidance conditions. The mean scores were higher under simulated employment conditions.

Gordon Personal Inventory was administered by Gordon and Stapleton (1956) to 121 students as a part of the actual job application who applied for summer and permanent employment.

Gordon and Stapleton (1956) also administered Gordon Personal Profile to a large number of students for actual guidance purpose.

The Gordon Personal Profile and Gordon Personal Inventory have important educational and industrial implications. In one research these tests were used to study consumer behaviour. In this research Gordon personal Profile and Gordon Personal Inventory and a disguised questionnaire containing question on the use of various products, such as headache remedies, Cigarettes, Chewing gum and Deodorants. A number of low but significant relations were found between product use and personality test scores. For example, the use of headache remedies correlated negatively with ascendancy and emotional stability: The acceptance of new fashions correlated positively with ascendancy and sociability (Tucker and Painter, 1961).

Bengali Versions:

The translation work of Gordon Personal Profile and Gordon Personal Inventory was jointly done with great care by Dutta (1979) and his research supervisor Rowshan Jahan, Professor of Psychology Department, Dhaka University. 50 undergraduate students (30 females and 20 males) of Dhaka University served as subjects for finding correlation between English and Bengali version of the instruments. The correlation of all the eight traits of the instruments were found positive ($0.79 < r < 0.91$) and significant ($p < 0.01$).

The validity of Bengali versions (GPP and GPI) were not checked when it was translated. Therefore, the validity of Gordon Personal Profile and Gordon Personal Inventory (Bengali version) to measure military leadership potentials were initially checked in the present study. The researcher tried to establish face

validity of the Bengali version because it was found very difficult to assess validity of eight different traits.

The researcher took help of three experts to find out face validity of Gordon Personal Profile and Gordon Personal Inventory (Bengali version). The experts were selected from ISSB who were senior most assessors of three different dimensions. First of all, with the help of scoring stencil, researcher separated each item from Bengali version of Gordon Personal Profile and Gordon Personal Inventory and categorized them as per eight different traits. Each item from each trait was then presented to the experts to obtain their opinions. How much a single item was related with respective trait, experts provided their opinions by a five point scale (an example is given in Appendix - A). Thus, an item which got highest disagreement, obtained score: 1 and the items which received highest agreement from the experts, obtained score: 5. Score: 3 indicated an in-between state of agreement and disagreement of the item related with the respective traits. Mean score of all items for each trait of three experts were then estimated. Correlations between the experts' opinions were also estimated to find out soundness of the face validity. One thing is to be noted that no single item was eliminated through this process to maintain standardization of the original test. The results are shown below:

Table 7. Mean Scores of Ascendancy in Measuring Face Validity

	Ascendancy (Expert - 1)	Ascendancy (Expert - 2)	Ascendancy (Expert - 3)
Mean	3.89	3.78	3.94
Overall Mean : 3.87			

Table 7 represents mean scores given by each expert in assessing items for ascendancy. Overall mean score has been found 3.87 (more than 3) which indicates positive attitudes of the experts regarding the items of the ascendancy.

Table 8. Correlation between the Experts' Opinions for Ascendancy

		Ascendancy (Expert - 1)	Ascendancy (Expert - 2)	Ascendancy (Expert - 3)
Ascendancy (Expert - 1	Pearson Correlation	1.000	.800**	.569*
	Sig. (2-tailed)	.	.000	.014
Ascendancy (Expert - 2	Pearson Correlation	.800**	1.000	.779**
	Sig. (2-tailed)	.000	.	.000
Ascendancy (Expert - 3	Pearson Correlation	.569*	.779**	1.000
	Sig. (2-tailed)	.014	.000	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 8 shows correlation between the experts' opinion for the items of ascendancy. The correlation between Expert-1 and Expert-2 has been found +0.8 ($p<0.01$), between Expert-2 and Expert-3 is +0.78 ($p<0.01$) and between Expert-3 and Expert-1 is +0.57 ($p=0.014$). Correlation indicates experts possessed almost same opinions about the items of ascendancy.

Table 9. Mean Scores of Responsibility in Measuring Face Validity

	Responsibility (Expert - 1)	Responsibility (Expert - 2)	Responsibility (Expert - 3)
Mean	4.11	3.94	4.06
Overall Mean : 4.04			

Table 9 represents mean scores given by each expert in assessing items for responsibility. Overall mean score has been found 4.04 (more than 3) which indicates positive attitudes of the experts regarding the items of the responsibility.

Table 10. Correlation between the Experts' Opinions for Responsibility

		Responsibility (Expert - 1)	Responsibility (Expert - 2)	Responsibility (Expert - 3)
Responsibility (Expert - 1	Pearson Correlation	1.000	.287	.305
	Sig. (2-tailed)	.	.248	.219
Responsibility (Expert - 2	Pearson Correlation	.287	1.000	.180
	Sig. (2-tailed)	.248	.	.474
Responsibility (Expert - 3	Pearson Correlation	.305	.180	1.000
	Sig. (2-tailed)	.219	.474	.

Table 10 shows correlation between the experts' opinion for the items of responsibility. The correlation between Expert-1 and Expert-2 has been found +0.29 ($p>0.05$), between Expert-2 and Expert-3 is +0.18 ($p>0.05$) and between Expert-3 and Expert-1 is +0.31 ($p>0.05$). Though the Correlation were found not significant but positive.

Table 11. Mean Scores of Emotional Stability in Measuring Face Validity

	Emotional Stability (Expert - 1)	Emotional Stability (Expert - 2)	Emotional Stability (Expert - 3)
Mean	4.39	4.22	4.22
Overall Mean : 4.28			

Table 11 represents mean scores given by each expert in assessing items for emotional stability. Overall mean score has been found 4.28 (more than 3) which indicates positive attitudes of the experts regarding the items of the emotional stability.

Table 12. Correlation between the Experts' Opinions for Emotional Stability

		Emotional Stability (Expert - 1)	Emotional Stability (Expert - 2)	Emotional Stability (Expert - 3)
Emotional Stability (Expert - 1)	Pearson Correlation	1.000	.579*	.579*
	Sig. (2-tailed)	.	.012	.012
Emotional Stability (Expert - 2)	Pearson Correlation	.579*	1.000	.719**
	Sig. (2-tailed)	.012	.	.001
Emotional Stability (Expert - 3)	Pearson Correlation	.579*	.719**	1.000
	Sig. (2-tailed)	.012	.001	.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 12 shows correlation between the experts' opinion for the items of emotional stability. The correlation between Expert-1 and Expert-2 has been found +0.58 (p=0.012), between Expert-2 and Expert-3 is +0.72 (p=0.01) and between Expert-3 and Expert-1 is +0.58 (p=0.012). Correlation indicates experts possessed almost same opinions about the items of emotional stability.

Table 13. Mean Scores of Sociability in Measuring Face Validity

	Sociability (Expert - 1)	Sociability (Expert - 2)	Sociability (Expert - 3)
Mean	4.44	4.44	4.39
Overall Mean : 4.42			

Table 13 represents mean scores given by each expert in assessing items for sociability. Overall mean score has been found 4.42 (more than 3) which indicates positive attitudes of the experts regarding the items of the sociability.

Table 14. Correlation between the Experts' Opinions for Sociability

		Sociability (Expert - 1)	Sociability (Expert - 2)	Sociability (Expert - 3)
Sociability (Expert - 1)	Pearson Correlation	1.000	.196	.454
	Sig. (2-tailed)	.	.436	.058
Sociability (Expert - 2)	Pearson Correlation	.196	1.000	.671**
	Sig. (2-tailed)	.436	.	.002
Sociability (Expert - 3)	Pearson Correlation	.454	.671**	1.000
	Sig. (2-tailed)	.058	.002	.

**. Correlation is significant at the 0.01 level (2-tailed).

Table 14 shows correlation between the experts' opinion for the items of sociability. The correlation between Expert-1 and Expert-2 has been found +0.2 ($p>0.05$), between Expert-2 and Expert-3 is +0.67 ($p=0.002$) and between Expert-3 and Expert-1 is +0.45 ($p>0.05$). Correlation indicates experts possessed almost same opinions about the items of sociability but some of them were found not significant.

Table 15. Mean Scores of Cautiousness in Measuring Face Validity

	Cautiousness (Expert - 1)	Cautiousness (Expert - 2)	Cautiousness (Expert - 3)
Mean	4.25	4.30	4.35
Overall Mean : 4.30			

Table 15 represents mean scores given by each expert in assessing items for cautiousness. Overall mean score has been found 4.30 (more than 3) which indicates positive attitudes of the experts regarding the items of the cautiousness.

Table 16. Correlation between the Experts' Opinions for Cautiousness

		Cautiousness (Expert - 1)	Cautiousness (Expert - 2)	Cautiousness (Expert - 3)
Cautiousness(Expert - 1)	Pearson Correlation	1.000	.503*	.532*
	Sig. (2-tailed)	.	.024	.016
Cautiousness(Expert - 2)	Pearson Correlation	.503*	1.000	.532*
	Sig. (2-tailed)	.024	.	.016
Cautiousness(Expert - 3)	Pearson Correlation	.532*	.532*	1.000
	Sig. (2-tailed)	.016	.016	.

*. Correlation is significant at the 0.05 level (2-tailed).

Table 16 shows correlation between the experts' opinion for the items of cautiousness. The correlation between Expert-1 and Expert-2 has been found +0.5 (p=0.024), between Expert-2 and Expert-3 is +0.53 (p=0.016) and between Expert-3 and Expert-1 is +0.53 (p=0.016). Correlation indicates experts possessed almost same opinions about the items of cautiousness.

Table 17. Mean Scores of Original Thinking in Measuring Face Validity

	Original Thinking (Expert - 1)	Original Thinking (Expert - 2)	Original Thinking (Expert - 3)
Mean	4.35	4.45	4.50
Overall Mean : 4.43			

Table 17 represents mean scores given by each expert in assessing items for original thinking. Overall mean score has been found 4.43 (more than 3) which indicates positive attitudes of the experts regarding the items of the original thinking.

Table 18. Correlation between the Experts' Opinions for Original Thinking

		Original Thinking (Expert - 1)	Original Thinking (Expert - 2)	Original Thinking (Expert - 3)
Original Thinking (Expert - 1)	Pearson Correlation	1.000	.554*	.452*
	Sig. (2-tailed)	.	.011	.045
Original Thinking (Expert - 2)	Pearson Correlation	.554*	1.000	.569**
	Sig. (2-tailed)	.011	.	.009
Original Thinking (Expert - 3)	Pearson Correlation	.452*	.569**	1.000
	Sig. (2-tailed)	.045	.009	.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 18 shows correlation between the experts' opinion for the items of original thinking. The correlation between Expert-1 and Expert-2 has been found +0.55 (p=0.011), between Expert-2 and Expert-3 is +0.57 (p=0.009) and between Expert-3 and Expert-1 is +0.45 (p=0.045). Correlation indicates experts possessed almost same opinions about the items of original thinking.

Table 19. Mean Scores of Personal Relation in Measuring Face Validity

	Personal Relation (Expert - 1)	Personal Relation (Expert - 2)	Personal Relation (Expert - 3)
Mean	4.40	4.50	4.50
Overall Mean : 4.47			

Table 19 represents mean scores given by each expert in assessing items for personal relation. Overall mean score has been found 4.47 (more than 3) which indicates positive attitudes of the experts regarding the items of the personal relation.

Table 20. Correlation between the Experts' Opinions for Personal Relation

		Personal Relation (Expert - 1)	Personal Relation (Expert - 2)	Personal Relation (Expert - 3)
Personal Relation (Expert - 1)	Pearson Correlation	1.000	.435	.290
	Sig. (2-tailed)	.	.055	.215
Personal Relation (Expert - 2)	Pearson Correlation	.435	1.000	.286
	Sig. (2-tailed)	.055	.	.222
Personal Relation (Expert - 3)	Pearson Correlation	.290	.286	1.000
	Sig. (2-tailed)	.215	.222	.

Table 20 shows correlation between the experts' opinion for the items of personal relation. The correlation between Expert-1 and Expert-2 has been found +0.44 ($p>0.05$), between Expert-2 and Expert-3 is +0.29 ($p>0.05$) and between Expert-3 and Expert-1 is +0.29 ($p>0.05$). Though the Correlations were found not significant but found positive.

Table 21. Mean Scores of Vigour in Measuring Face Validity

	Vigour (Expert - 1)	Vigour (Expert - 2)	Vigour (Expert - 3)
Mean	4.35	4.25	4.50
Overall Mean : 4.37			

Table 21 represents mean scores given by each expert in assessing items for vigour. Overall mean score has been found 4.37 (more than 3) which indicates positive attitudes of the experts regarding the items of the vigour.

Table 22. Correlation between the Experts' Opinions for Vigour

		Vigour (Expert - 1)	Vigour (Expert - 2)	Vigour (Expert - 3)
Vigour (Expert - 1)	Pearson Correlation	1.000	.321	.582**
	Sig. (2-tailed)	.	.168	.007
Vigour (Expert - 2)	Pearson Correlation	.321	1.000	.079
	Sig. (2-tailed)	.168	.	.741
Vigour (Expert - 3)	Pearson Correlation	.582**	.079	1.000
	Sig. (2-tailed)	.007	.741	.

**. Correlation is significant at the 0.01 level (2-tailed).

Table 22 shows correlation between the experts' opinion for the items of vigour. The correlation between Expert-1 and Expert-2 has been found +0.32 ($p>0.05$), between Expert-2 and Expert-3 is +0.08 ($p>0.05$) and between Expert-3 and Expert-1 is +0.58 ($p=0.007$). Correlation indicates experts possessed somewhat same opinions about the items of vigour.

Table 23. Mean Scores of Face Validity

Traits	Mean score of Expert - 1	Mean score of Expert - 2	Mean score of Expert - 3	Overall Mean
Ascendancy	3.89	3.78	3.94	3.87
Responsibility	4.11	3.94	4.06	4.04
Emotional Stability	4.39	4.22	4.22	4.28
Sociability	4.44	4.44	4.39	4.42
Cautiousness	4.25	4.30	4.35	4.30
Original Thinking	4.35	4.45	4.50	4.43
Personal Relation	4.47	4.50	4.50	4.47
Vigour	4.35	4.25	4.50	4.37

Above table shows obtained mean scores of face validity of GPP and GPI. Three experts had rated each item of the each trait by a five point scale. Result shows that highest mean score was obtained by the items of "Personal Relation" from the experts. Whereas, "Ascendancy" got lowest mean score from the experts.

RATIONALE OF USING GPP AND GPI

The citizens of Bangladesh are eligible to apply for military. Though a minimum proficiency in English language is to be fulfilled by the candidates, but as a Bangladeshi, they are well acquainted with Bengali language. There is no doubt, paper and pencil test in Bengali language would be best for understanding for the candidates.

The researcher decided to use Gordon Personal Profile and Gordon Personal Inventory after had been obtaining opinions from the experts and analyzing different theoretical information. Regarding the traits measured by Gordon Personal Profile and Gordon Personal Inventory were found relevant with the present study. These traits can be treated as military leadership potentials. Gordon Personal Profile (GPP) measures four traits of personality as Ascendancy, Responsibility, Emotional Stability and Sociability. On the other

hand Gordon Personal Inventory (GPI) determines four traits as Cautiousness, Original Thinking, Personal Relation and Vigour.

Experts' opinion regarding the items of GPP and GPI has been described earlier. Theoretically, task-oriented and Relations-oriented leadership are equally important for military (Blake and Mouton, 1964). Task oriented leadership could be influenced by ascendancy, sense of responsibility, cautiousness, original thinking and the level of vigour of an individual. Emotional stability, sociability and personal relations are very much required for relation oriented leadership.

According to General Service Training Pamphlet (GSTP – 0030) of Bangladesh Army (Leadership and Military Command), military leadership possesses following traits: Alertness, Bearing, Courage, Decisiveness, Dependability, Endurance, Enthusiasm, Initiative, Integrity, Intelligence, Judgment, Loyalty, Social adaptability, etc. Ascendancy and Vigour of Gordon test can be put side by side with Courage, Decisiveness, Endurance, Enthusiasm and Initiative of GSTP – 0030, Responsibility of Gordon test can be linked with Dependability of GSTP – 0030, Sociability and Personal Relation of Gordon test can be associated with Loyalty and Social adaptability of GSTP – 0030, Cautiousness of Gordon test can be linked with Alertness of GSTP – 0030, and Original Thinking of Gordon test can be allied with Intelligence and Judgment of GSTP – 0030.

According to Maj Cotton (1979) the required military leadership potentialities are Devotion or self-sacrifice, Loyalty, Planning Ability, Knowledge, Integrity, Courage, Physical Stamina, Dynamism, Emotional Intelligence, etc. The association between the traits described by Maj Cotton and the traits measure by Gordon Personal Profile and Gordon Personal Inventory are: Devotion or self-sacrifice, Courage, Physical Stamina and Dynamism of Maj Cotton with Ascendancy and Vigour of GPP, Emotional Intelligence with Emotional Stability and Planning Ability with Original Thinking.

Certain inherent leadership qualities like self confidence, initiatives, sense of responsibility etc are required to be a military leader. These abilities can not be instilled but which are latent or dormant can be developed (Maj Syed, 2005).

The experts (selected from ISSB who were senior most assessors of three different dimensions) also considered the traits which measured by the Bengali version of Gordon Personal Profile and Gordon Personal Inventory as related with military leadership potentials. A five point scale was presented against each of the eight traits measured by the Bengali version of Gordon Personal Profile and Gordon Personal Inventory along with all items to three experts (See Appendix A-2). The intension was to collect experts' opinions about it's relevance with military leadership potentials. A trait which got lowest relevance, obtained score: 1 and the trait which received highest relevance from the experts, obtained score: 5. Score: 3 indicated in between state of highest and lowest score of the traits related with the military leadership potentials. The obtained mean scores of three experts with their correlation are given below:

Table 24. Mean Scores of Experts' Opinions for Relevancies with Military Leadership Potentials

Trait	Mean
Ascendancy	5.00
Cautiousness	3.33
Emotional Stability	5.00
Original Thinking	4.00
Personal Relation	4.33
Responsibility	5.00
Sociability	4.00
Vigour	4.67

Table 24 shows mean scores of three experts regarding their opinion about relevance of eight personality traits as military leadership potentials. All

scores are found more than 3, indicates experts' positive attitude regarding their relevance with military leadership potentials.

Table 25. Correlation between Experts' Opinions for Relevancies with Military Leadership Potentials

		Expert - 1	Expert - 2	Expert - 3
Expert - 1	Pearson Correlation	1.000	.742*	.898**
	Sig. (2-tailed)	.	.035	.002
Expert - 2	Pearson Correlation	.742*	1.000	.539
	Sig. (2-tailed)	.035	.	.168
Expert - 3	Pearson Correlation	.898**	.539	1.000
	Sig. (2-tailed)	.002	.168	.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Above table shows correlation between the experts' opinion for relevance with military leadership potentials. The correlation between Expert-1 and Expert-2 has been found +0.74 ($p < 0.05$), between Expert-2 and Expert-3 is +0.54 ($p > 0.05$) and between Expert-3 and Expert-1 is +0.9 ($p < 0.01$). Correlation indicates experts possessed almost same opinions about the traits measured by Bengali version of Gordon Personal Profile and Gordon Personal Inventory as military leadership potentials.

Bass (1957) also administered the Gordon Personal Profile and *Ohio State Leader Behaviour Description Questionnaire* (LBDQ) and found significant positive correlations between these two tests. The researcher found The Bengali version of Gordon Personal Profile and Gordon Personal Inventory within a single booklet which covers numerous dimensions of military leadership potentials. The concerned test had been also found very easy to administer and less time consuming. It takes around 40 to 45 minutes, starting from the instruction to conclude, which made the test convenient to administer in ISSB where tight time schedule persists.

The conducted researches in finding validity and reliability of original Gordon Personal Profile and Gordon Personal Inventory, The positive and significant correlation between original and Bengali version of Gordon Personal Profile and Gordon Personal Inventory, experts' opinion about the face validity of the test items, all reflect the suitability of Bengali version of Gordon Personal Profile (GPP) and Gordon Personal Inventory (GPI) for this study.

DESIGN

The independent variables of the present study were not treatment variables and the researcher did not have any scope to manipulate independent variables on different samples. Classification variables were set as independent variables in the present study, where the characteristics of the levels were present prior to the conduct of the research. The present study is an attempt to describe relation between the classification variables (birth order, family size, SES) and dependent variables (personal relation, emotional stability, responsibility, ascendancy, vigour, sociability, cautiousness and original thinking). Without having few readily available control from ISSB (educational standard, intelligence, age, sex, motivation, etc) the researcher did not have any attempt of controlling variables. All these characteristics indicate the present research not an experiment at all, but a correlational study. The samples were drawn from ISSB at random, where the probability of inclusion was equal for every candidate who have been qualified in the intelligence test.

PROCEDURE

The present study was conducted through following procedure:

1. Source of Data

Collection of data was one of the important segments of the present research. The main objective of the present study is to aid knowledge in selection procedure of Bangladesh armed forces. That was the main reason that researcher collected samples from ISSB. The researcher had to take his best efforts so that the sample of the study represents the younger lots of Bangladesh who are not a military officer but a civilian who applied to become a military officer. The intention of the researcher is to measure military leadership potentials of interested and motivated subjects who may have the qualities to become a military leader. Potentials of a selected candidate are likely to continue for the rest of his life as personality traits are remarkably stable (McCrae & Costa, 1990). The age limits of the subjects were from 17 to 21 years, set by the Services Head Quarters.

The subjects of the present research had to be included in such a manner that it represents motivated candidates of the Bangladesh to join armed forces. Instead of using stratified sampling procedure, researcher used simple random sampling round the year so that all characteristics of ISSB candidates may present in the sample. ISSB conducts two sessions (summer and winter) in one calendar year. Each session consists of 20 to 25 separate boards. Approximately 80 to 100 candidates are called on each board. A single board continues for four days duration. Initially the candidates are given chest numbers and then they sit for an intelligence test. The candidates, who scored below average in the intelligence test, are screened out and send back. The candidates, who qualify intelligence test, can appear rest of the tests for last three days. The researcher made a box consists of 100 pieces of papers where chest numbers 1 to 100 were written. On day four, the researcher randomly used to draw 20 chest numbers

from the box who had been staying in ISSB. Bengali version of Gordon Personal Profile and Gordon Personal Inventory where administered on those 20 randomly selected candidates. The number 20 was found suitable for researcher to handle and accommodate in each board. The whole process was continued for one year (2005) and at the end; researcher could collect data of 900 randomly selected candidates. The candidates of Extended family (grand father/mother lives/live with family) and single parent (father or mother died, separated or divorced) were excluded from the sample to control number of interactions within the family as per family size. The candidates who had been applied from cadet colleges were also been excluded. The reason was, Cadet College students get admit in the institution at class VII when they are approximately 12-14 years old. They pass their daily routine in a confined residential institution, where they get minimum opportunities to meet their family -members. Research findings also have showed that individuals grew up in outside the family, firstborns and later-borns are indistinguishable in personality (Harris, 2000). Researcher felt there were less scopes and probability for the cadet college student to be influenced by the birth order, family, size and SES. The data which were found not properly filled or faulty were also excluded. Finally the researcher got data of 718 candidates for statistical analysis.

2. Determinants of Socio Economic Status

It was an important factor to determine the socio-economic status of a candidate. In the process of classification, researcher took help of a format introduced by Rafiq Ahmed (1997) which includes Respondent's Profession, Father's Profession, Respondent's Educational qualification, Father's Educational qualification, Respondent's Income and Father's Income to determine socio economic status of an individual. Each dimension consists of different levels with different numerical weights. The summation of all dimensions provides a numerical value, reflecting socio economic status of an individual. The format was a bit modified in the present study because all the subjects of the present

study are student who had just appeared or passed HSC level. Another reason of modification is the increased inflation of money comparing with the earlier model. Therefore, Respondent's Education, Profession and Income were excluded. Instead of Father's income, Parents' income has been introduced because working mothers were found in the sample of the present study. A new dimension "Mother's Education" has been introduced. The modified format to determine socio economic status of an individual consists of four dimensions (See Appendix - B) as Profession of Father, Educational Qualification of Father, Educational Qualification of Mother and Monthly Income of Parents. Each dimension has been sub divided into 6 levels with different numerical weights (1 to 6). Thus, highest number can be obtained as 24 (4x6) and lowest number can be 4 (4x1). The new procedure to determine individual's socio economic status were administered on the entire population of summer and winter – 2005 (N=2472). Estimated mean was found 15.16 and Standard Division (SD) 3.98. The researcher has set 11 to 19 as Middle Class, below 11 as Lower Middle Class and above 19 as Upper Middle Class (+/- 1 SD from Mean).

3. Administration of Test

The administration of test (The Bengali version of Gordon Personal Profile and Gordon Personal Inventory) was also important part for the present study. The potential adolescents of Bangladesh are still very interested and motivated to join armed forces as an officer. Dignity, early establishment, honour in the society, security and adventure are the key factors which influence an adolescent to join military as an officer. This eagerness makes an adolescent a job seeker candidate for military. The candidates sometimes attempt made-up and artificial responses to be selected in ISSB. Different methods and check-back systems are followed to identify made-up responses of the candidate in ISSB, but it is very difficult to identify these made-up responses when an objective type personality test is administered without provision of measuring its consistency.

The Bengali version of Gordon Personal Profile and Gordon Personal Inventory are basically an objective type personality test which do not have any scope to measure consistency of the individual scores. Therefore, only self motivation can insist a candidate to draw a true picture about on self. The researcher administered Bengali version of Gordon Personal Profile and Gordon Personal Inventory on forth day of ISSB, after formal declaration of ending of the ISSB tests. The intention of the researcher was to avoid made up responses. The researcher also used to clarify the purpose of administration of Gordon Personal Profile and Gordon Personal Inventory through detail instructions. Use of lottery to select samples was conducted in front of the candidates. That may provide sufficient exposure to the candidates about the intention of test administration. The candidates were also clarified that there will be no impact of Gordon Personal Profile and Gordon Personal Inventory on their selection. The researcher administered the Bengali version of Gordon Personal Profile and Gordon Personal Inventory on randomly selected candidates in each board. One board consists of 4 days schedule to administer series of tests of the ISSB. After completion of one board, the candidate is either selected or rejected. The percentage of rejected candidate is much higher than selected candidates. Present study included both the selected and rejected candidates without having any biasness, as because GPP and GPI had been used to administer before ISSB result used to decide. It is very important to mention that, **No impact of Gordon Personal Profile and Gordon Personal Inventory was taken for selection in ISSB.**

CHAPTER - III

RESULT

RESULTS

The researcher had to decide and select appropriate statistics to analyze obtained data. This was the most vital task in the present study because inappropriate statistics may generate distort result. Factorial Analysis (3x3x3) by following Factorial Design may provide good comprehensive analysis but rejected by the researcher because of the following reason:

a. The present study was not an experiment and researcher had limited control and scope to manipulate independent variables.

b. Cross tabulation of the data (Table - 06) shows some blank spaces, which can not be filled and therefore, factorial design and analysis would be not appropriate.

The researcher intended to use all independent variables to explain each of the dependent variables. The multiple regression analysis was finally selected to serve the purpose.

It was found a bit difficult to enter independent variables into computer because the levels of independent variable were categorical (nominal scale). The researcher took help of SPSS (Statistical Package for Social Science) manual from the internet, where dummy variables had been used to solve this type of problem. As an example, a middle born subject from more than two children family with middle class status had been entered into computer in the following manner:

	Birth Order			Family Size			SES		
Serial No	First Born	Middle Born	Last Born	Single Child	Two Children	More than Two Children	Lower Middle Class	Middle Class	Upper Middle Class
01	0	1	0	0	0	1	0	1	0

The presence of any level had been entered as 1(one) and others as 0 (zero) in the SPSS.

Instead of exactly utilizing the value of independent variables, the values were categorized into different levels. Researcher had the reason to believe that the effects of psychological environment between these values are not equal. For example, the environmental distance between "single child family" and "two children family" may not be identical as the environmental distance between "two children family" and "three children family".

The second problem researcher faced to select appropriate method of multiple regression analysis. Five types of methods (Enter, Stepwise, Forward, Backward, and Remove) are available in the SPSS for multiple regression analysis. Researcher used 'Stepwise' method in the present study because of the following reason:

a. Researcher was not sure about the effects of independent variables on dependent variables.

b. Forced entry (enter method) may distort result.

c. Stepwise model is the combination of the forward and backward methods.

d. In the stepwise method, variables that were entered are checked at each step for removal.

e. Likewise, in the removal method, variables that were excluded are checked for re-entry.

The only drawback of the stepwise method is exclusion of variables from the regression model, which does not have significant impact ($p > 0.05$) on dependent variable.

Each of the dependent variable has been described and analyzed by the following formula:

$$y_i = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \ldots + \beta_j x_j + \epsilon$$

y = multiple regression line for dependent variables

α = constant value in multiple regression model

x = levels of independent variables

β = coefficient with independent variable in the multiple regression model

ϵ = error value for correction in the multiple regression model

Following results had been found by administering above mentioned procedures:

Table 26. Model Summary of Multiple Regression Analysis when Dependent Variable is Ascendancy

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.536[a]	.287	.286	4.29	
2	.601[b]	.361	.359	4.07	
3	.640[c]	.409	.407	3.91	
4	.673[d]	.452	.449	3.77	2.114

a. Predictors: (Constant), First Born

b. Predictors: (Constant), First Born, Middle Born

c. Predictors: (Constant), First Born, Middle Born, Single Child

d. Predictors: (Constant), First Born, Middle Born, Single Child, Upper Middle Class

Table 27. ANOVA Table of Multiple Regression Model when Dependent Variable is Ascendancy

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5319.734	1	5319.734	288.774	.000[a]
	Residual	13189.981	716	18.422		
	Total	18509.716	717			
2	Regression	6686.511	2	3343.255	202.181	.000[b]
	Residual	11823.205	715	16.536		
	Total	18509.716	717			
3	Regression	7579.065	3	2526.355	165.024	.000[c]
	Residual	10930.651	714	15.309		
	Total	18509.716	717			
4	Regression	8372.810	4	2093.203	147.230	.000[d]
	Residual	10136.906	713	14.217		
	Total	18509.716	717			

a. Predictors: (Constant), First Born

b. Predictors: (Constant), First Born, Middle Born

c. Predictors: (Constant), First Born, Middle Born, Single Child

d. Predictors: (Constant), First Born, Middle Born, Single Child, Upper Middle Class

Table-26 and Table-27 reveal model summary of multiple regression analysis with level of significance, where dependent variable is ascendancy. Table-26 shows values of R Square are increasing with inclusion of different levels of independent variables. Birth order (first born and middle born), family size (single child) and SES (upper middle class) could explain 45.2 % (44.9% in population) of ascendancy of the subjects which is highly significant ($p < 0.01$). The value of Durbin – Watson test had been found 2.114 (close to value 2) which indicates independency of the data points as free from time series. However, 54.8% (55.1% in population) of ascendancy could not be explained by the independent variables of the present study. Result tells the presence of other variables which had been not included in the present study, but influence ascendancy.

Table 28. Coefficients of Multiple Regression Model when Dependent Variable is Ascendancy

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.436	.207		113.360	.000
	First Born	5.557	.327	.536	16.993	.000
2	(Constant)	21.333	.303		70.385	.000
	First Born	7.660	.387	.739	19.811	.000
	Middle Born	3.611	.397	.339	9.091	.000
3	(Constant)	21.333	.292		73.151	.000
	First Born	8.430	.385	.813	21.871	.000
	Middle Born	3.611	.382	.339	9.449	.000
	Single Child	-4.807	.630	-.232	-7.636	.000
4	(Constant)	20.257	.316		64.147	.000
	First Born	9.423	.395	.909	23.886	.000
	Middle Born	4.328	.381	.406	11.372	.000
	Single Child	-4.869	.607	-.235	-8.025	.000
	Upper Middle Class	3.340	.447	.221	7.472	.000

Table 29. Confidence Interval (95%) of Coefficients when Dependent Variable is Ascendancy

Model		95% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	23.030	23.842
	First Born	4.915	6.199
2	(Constant)	20.738	21.928
	First Born	6.901	8.419
	Middle Born	2.831	4.391
3	(Constant)	20.761	21.906
	First Born	7.673	9.187
	Middle Born	2.861	4.361
	Single Child	-6.043	-3.571
4	(Constant)	19.637	20.877
	First Born	8.649	10.198
	Middle Born	3.581	5.075
	Single Child	-6.060	-3.678
	Upper Middle Class	2.462	4.217

Table-28 shows coefficients of multiple regression analysis when dependent variable is ascendancy. Stepwise method included Birth order (first born and middle born), family size (single child) and SES (upper middle class) in 4th stage of the model. First born, middle born and upper middle class had positive effect on ascendancy (β = 9.423, β = 4.328 and β = 3.340) whereas, negative effect had been found with single child (β = - 4.869). Standardized coefficients of β show different strength of levels of independent variables as first born (0.909) > middle born (0.406) > single child (-0.235) > upper middle class (0.221). Table-29 reveals lower and upper value of each β with 95% confidence interval.

Table 30. Collinearity Statistics in Multiple Regression Model when Dependent Variable is Ascendancy

Model		Collinearity Statistics	
		Tolerance	VIF
1	First Born	1.000	1.000
2	First Born	.642	1.557
	Middle Born	.642	1.557
3	First Born	.598	1.672
	Middle Born	.642	1.557
	Single Child	.897	1.115
4	First Born	.530	1.886
	Middle Born	.601	1.663
	Single Child	.897	1.115
	Upper Middle Class	.879	1.137

Table 31. Residuals Statistics in Multiple Regression Model when Dependent Variable is Ascendancy

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	20.26	33.02	25.66	3.42	718
Residual	-14.26	9.42	1.67E-15	3.76	718
Std. Predicted Value	-1.580	2.155	.000	1.000	718
Std. Residual	-3.781	2.497	.000	.997	718

Table-30 and Table-31 represent collinearity and residuals statistics respectively in measuring ascendancy. Minimum value of tolerance with highest value of VIF (Variance Inflation Factor) at collinearity statistics had been found in first born as 0.530 (more than value 0.4) and 1.886 (less than value 5) respectively. The result indicates independent variables are not multicollinear and therefore, distort free. Table-31 shows minimum and maximum standardized residual value as -3.781 and 2.497 (within +/- 5) respectively. The result indicates that analysis is not affected by outliers.

Figure 4. Histogram of Regression Standardized Residual when Dependent Variable is Ascendancy

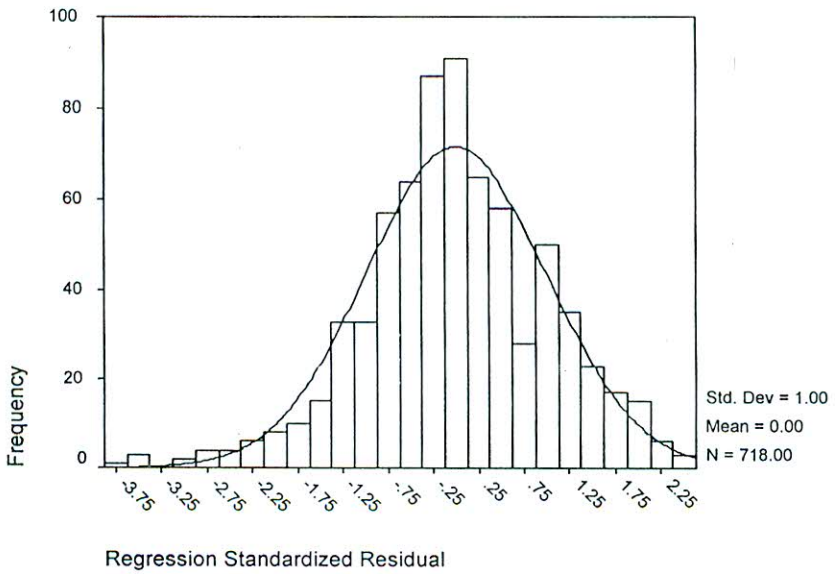


Figure 5. Normal P-P Plot of Regression Standardized Residual when Dependent Variable is Ascendancy

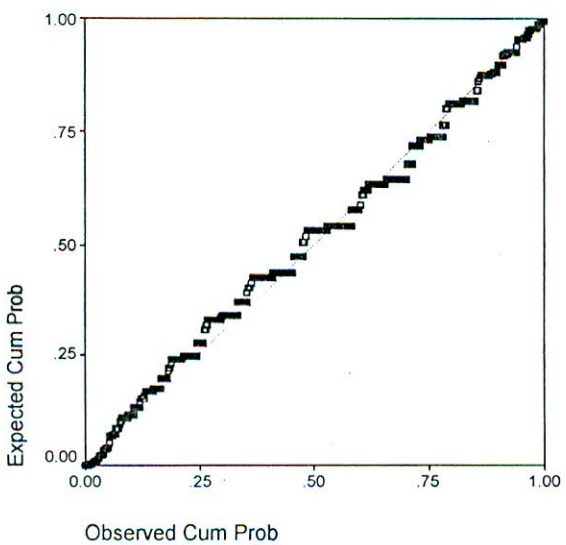


Table 32. Model Summary of Multiple Regression Analysis when Dependent Variable is Responsibility

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.422[a]	.178	.177	4.15	
2	.456[b]	.208	.206	4.08	
3	.479[c]	.229	.226	4.02	2.071

a. Predictors: (Constant), First Born

b. Predictors: (Constant), First Born, Single Child

c. Predictors: (Constant), First Born, Single Child, Lower Middle Class

Table 33. ANOVA Table of Multiple Regression Model when Dependent Variable is Responsibility

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2674.952	1	2674.952	155.437	.000[a]
	Residual	12321.823	716	17.209		
	Total	14996.774	717			
2	Regression	3118.209	2	1559.104	93.846	.000[b]
	Residual	11878.566	715	16.613		
	Total	14996.774	717			
3	Regression	3437.114	3	1145.705	70.766	.000[c]
	Residual	11559.660	714	16.190		
	Total	14996.774	717			

a. Predictors: (Constant), First Born

b. Predictors: (Constant), First Born, Single Child

c. Predictors: (Constant), First Born, Single Child, Lower Middle Class

Table-32 and Table-33 reveal model summary of multiple regression analysis with level of significance, where dependent variable is responsibility. Table-32 shows values of R Square are increasing with inclusion of different levels of independent variables. Birth order (first born), family size (single child) and SES (lower middle class) could explain 22.9 % (22.6% in population) of responsibility of the subjects which is highly significant ($p < 0.01$). The value of Durbin – Watson test had been found 2.071 (close to value 2), which indicates independency of the data points as free from time series. However, 77.1% (77.4% in population) of responsibility could not be explained by the independent variables of the present study. Result indicates presence of other variables which had been not included in the present study, but influence responsibility.

Table 34. Coefficients of Multiple Regression Model when Dependent Variable is Responsibility

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.687	.200		133.553	.000
	First Born	3.940	.316	.422	12.467	.000
2	(Constant)	26.687	.196		135.927	.000
	First Born	4.483	.328	.481	13.675	.000
	Single Child	-3.388	.656	-.182	-5.165	.000
3	(Constant)	27.122	.217		124.864	.000
	First Born	4.363	.325	.468	13.435	.000
	Single Child	-3.433	.647	-.184	-5.302	.000
	Lower Middle Class	-1.550	.349	-.146	-4.438	.000

Table 35. Confidence Interval (95%) of Coefficients when Dependent Variable is Responsibility

Model		95% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	26.294	27.079
	First Born	3.320	4.561
2	(Constant)	26.301	27.072
	First Born	3.840	5.127
	Single Child	-4.675	-2.100
3	(Constant)	26.696	27.548
	First Born	3.726	5.001
	Single Child	-4.704	-2.162
	Lower Middle Class	-2.236	-.865

Table-34 shows coefficients of multiple regression analysis when dependent variable is responsibility. Stepwise method included Birth order (first born), family size (single child) and SES (lower middle class) in 3rd stage of the model. First born had positive effect on responsibility (β = 4.363) whereas, negative effect had been found with single child and lower middle class (β = -3.433 and β = - 1.550). Standardized coefficients of β show different strength of levels of independent variables as first born (0.468) > single child (-0.184) > lower middle class (-0.146). Table-35 reveals lower and upper value of each β with 95% confidence interval.

Table 36. Collinearity Statistics in Multiple Regression Model when Dependent Variable is Responsibility

Model		Collinearity Statistics	
		Tolerance	VIF
1	First Born	1.000	1.000
2	First Born	.897	1.115
	Single Child	.897	1.115
3	First Born	.891	1.122
	Single Child	.897	1.115
	Lower Middle Class	.991	1.009

Table 37. Residuals Statistics in Multiple Regression Model when Dependent Variable is Responsibility

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	25.57	31.49	28.26	2.19	718
Residual	-16.49	9.88	-5.49E-16	4.02	718
Std. Predicted Value	-1.229	1.472	.000	1.000	718
Std. Residual	-4.097	2.455	.000	.998	718

Table-36 and Table-37 represent collinearity and residuals statistics respectively in measuring responsibility. Minimum value of tolerance with highest value of VIF (Variance Inflation Factor) at collinearity statistics had been found in first born as 0.891 (more than value 0.4) and 1.122 (less than value 5) respectively. The result indicates independent variables are not multicollinear and therefore, distort free. Table-37 shows minimum and maximum standardized residual value as -4.097 and 2.455 (within +/- 5) respectively. The result indicates that analysis is not affected by outliers.

Figure 6. Histogram of Regression Standardized Residual when Dependent Variable is Responsibility

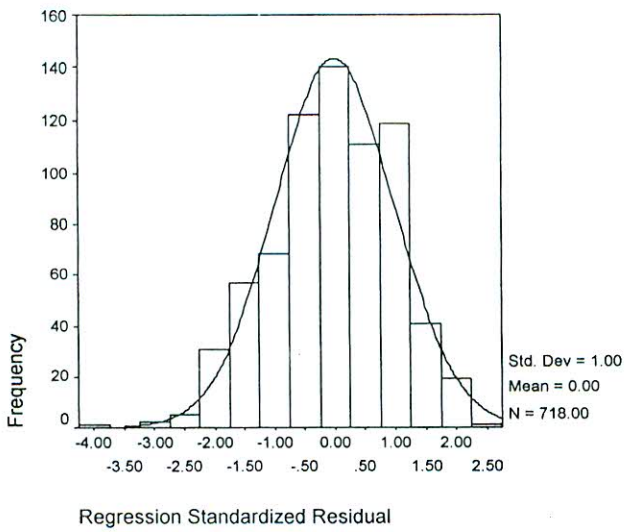


Figure 7. Normal P-P Plot of Regression Standardized Residual when Dependent Variable is Responsibility

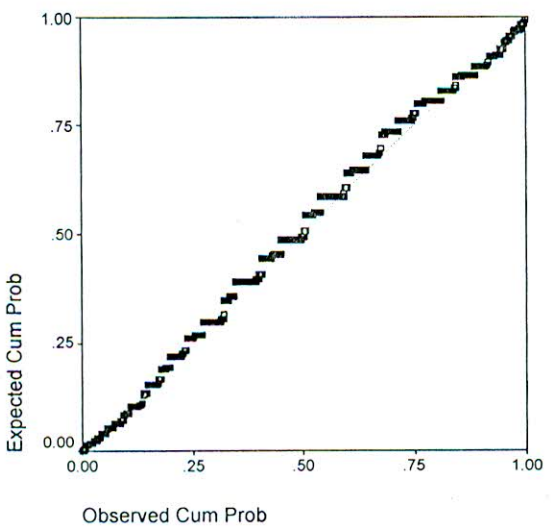


Table 38. Model Summary of Multiple Regression Analysis when Dependent Variable is Sociability

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.343[a]	.118	.117	5.04	
2	.382[b]	.146	.144	4.97	
3	.393[c]	.154	.151	4.95	1.975

a. Predictors: (Constant), More Than Two Children

b. Predictors: (Constant), More Than Two Children, Middle Born

c. Predictors: (Constant), More Than Two Children, Middle Born, Middle Class

Table 39. ANOVA Table of Multiple Regression Model when Dependent Variable is Sociability

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2436.269	1	2436.269	95.754	.000[a]
	Residual	18217.241	716	25.443		
	Total	20653.510	717			
2	Regression	3013.575	2	1506.788	61.075	.000[b]
	Residual	17639.935	715	24.671		
	Total	20653.510	717			
3	Regression	3182.158	3	1060.719	43.348	.000[c]
	Residual	17471.351	714	24.470		
	Total	20653.510	717			

a. Predictors: (Constant), More Than Two Children

b. Predictors: (Constant), More Than Two Children, Middle Born

c. Predictors: (Constant), More Than Two Children, Middle Born, Middle Class

Table-38 and Table-39 represent model summary of multiple regression analysis with level of significance, where dependent variable is sociability. Table-38 shows values of R Square are increasing with inclusion of different levels of independent variables. Birth order (middle born), family size (more than two children) and SES (middle class) could explain 15.4 % (15.1% in population) of sociability of the subjects which is highly significant ($p < 0.01$). The value of Durbin – Watson test had been found 1.975 (close to value 2) which indicates independency of the data points as free from time series. However, 84.6% (84.9% in population) of sociability could not be explained by the independent variables of the present study. Result tells the presence of other variables which had been not included in the present study, but influence sociability.

Table 40. Coefficients of Multiple Regression Model when Dependent Variable is Sociability

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.006	.267		89.921	.000
	More Than Two Children	3.684	.376	.343	9.785	.000
2	(Constant)	24.006	.263		91.317	.000
	More Than Two Children	5.594	.542	.522	10.328	.000
	Middle Born	-2.747	.568	-.244	-4.837	.000
3	(Constant)	24.662	.362		68.106	.000
	More Than Two Children	5.633	.540	.525	10.438	.000
	Middle Born	-2.889	.568	-.257	-5.085	.000
	Middle Class	-1.006	.383	-.091	-2.625	.009

Table 41. Confidence Interval (95%) of Coefficients when Dependent Variable is Sociability

Model		95% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	23.481	24.530
	More Than Two Children	2.945	4.423
2	(Constant)	23.489	24.522
	More Than Two Children	4.531	6.658
	Middle Born	-3.862	-1.632
3	(Constant)	23.951	25.373
	More Than Two Children	4.573	6.692
	Middle Born	-4.005	-1.774
	Middle Class	-1.759	-.254

Table-40 shows coefficients of multiple regression analysis when dependent variable is sociability. Stepwise method included Birth order (middle born), family size (more than two children) and SES (middle class) in 3rd stage of the model. Middle born and middle class had negative effect on sociability (β = -2.889 and β = -1.006) whereas, positive effect had been found with more than two children (β = 5.633). Standardized coefficients of β show different strength of levels of independent variables as more than two children (0.525) > middle born (-0.257) > middle class (-0.091). Table-41 reveals lower and upper value of each β with 95% confidence interval.

Table 42. Collinearity Statistics in Multiple Regression Model when Dependent Variable is Sociability

Model		Collinearity Statistics	
		Tolerance	VIF
1	More Than Two Children	1.000	1.000
2	More Than Two Children	.468	2.135
	Middle Born	.468	2.135
3	More Than Two Children	.468	2.136
	Middle Born	.464	2.154
	Middle Class	.987	1.013

Table 43. Residuals Statistics in Multiple Regression Model when Dependent Variable is Sociability

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	23.66	30.30	25.86	2.11	718
Residual	-18.41	15.60	-1.75E-15	4.94	718
Std. Predicted Value	-1.045	2.106	.000	1.000	718
Std. Residual	-3.721	3.154	.000	.998	718

a. Dependent Variable: Sociability

Table-42 and Table-43 represent collinearity and residuals statistics respectively in measuring sociability. Minimum value of tolerance with highest value of VIF (Variance Inflation Factor) at collinearity statistics had been found in middle born as 0.464 (more than value 0.4) and 2.154 (less than value 5) respectively. The result indicates independent variables are not multicollinear and therefore, distort free. Table-43 shows minimum and maximum standardized residual value as -3.721 and 3.154 (within +/- 5) respectively. The result indicates that analysis is not affected by outliers.

Figure 8. Histogram of Regression Standardized Residual when Dependent Variable is Sociability

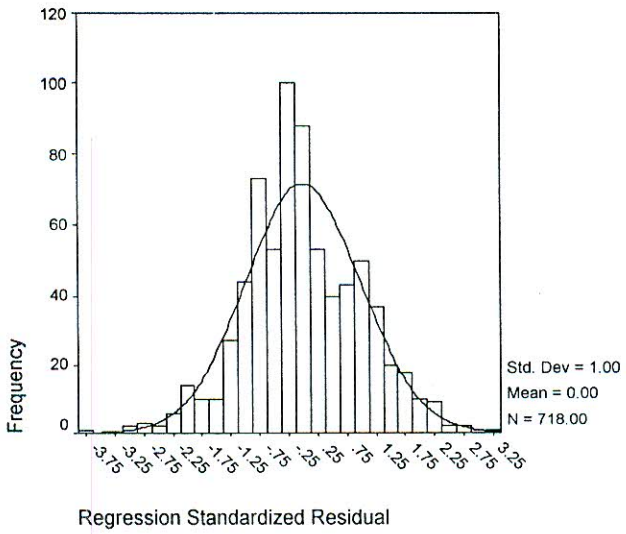


Figure 9. Normal P-P Plot of Regression Standardized Residual when Dependent Variable is Sociability

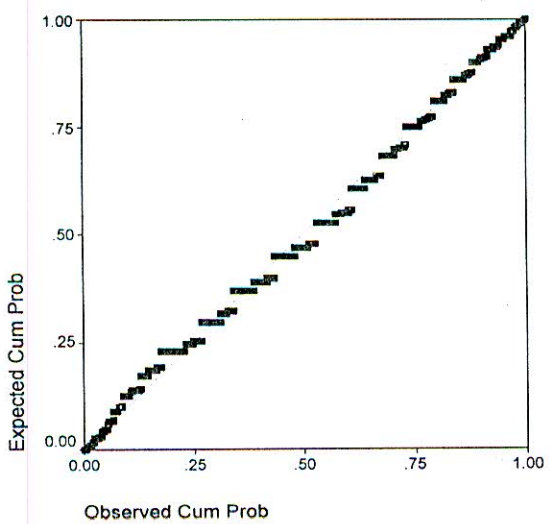


Table 44. Model Summary of Multiple Regression Analysis when Dependent Variable is Original Thinking

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.107[a]	.011	.010	3.54	2.058

a. Predictors: (Constant), First Born

Table 45. ANOVA Table of Multiple Regression Model when Dependent Variable is Original Thinking

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103.691	1	103.691	8.270	.004[a]
	Residual	8977.040	716	12.538		
	Total	9080.731	717			

a. Predictors: (Constant), First Born

Table-44 and Table-45 reveal model summary of multiple regression analysis with level of significance, where dependent variable is original thinking. Table-44 shows values of R Square after inclusion of just one level of independent variables. Birth order (first born) could explain only 1.1 % (1% in population) of original thinking of the subjects which is significant (p = 0.04). The value of Durbin – Watson test had been found 2.058 (close to value 2) which indicates independency of the data points as free from time series. However, 98.99% (99% in population) of original thinking could not be explained by the independent variables of the present study. Result tells the presence of different other factors which had been not included in the present study, but influence original thinking.

Table 46. Coefficients of Multiple Regression Model when Dependent Variable is Original Thinking

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.970	.171		140.538	.000
	First Born	.776	.270	.107	2.876	.004

Table 47. Confidence Interval (95%) of Coefficients when Dependent Variable is Original Thinking

Model		95% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	23.635	24.305
	First Born	.246	1.305

Table-46 shows coefficients of multiple regression analysis when dependent variable is original thinking. Stepwise method included only one level of birth order (first born) in the model. First born had positive effect on original thinking (β = 0.776). Table-47 reveals lower and upper value of β with 95% confidence interval.

Table 48. Residuals Statistics in Multiple Regression Model when Dependent Variable is Original Thinking

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	23.97	24.75	24.28	.38	718
Residual	-12.75	11.03	-7.97E-16	3.54	718
Std. Predicted Value	-.815	1.225	.000	1.000	718
Std. Residual	-3.600	3.115	.000	.999	718

Table-48 represents residuals statistics in measuring original thinking. Minimum and maximum standardized residual value had been found as -3.600 and 3.115 (within +/- 5) respectively. The result indicates that analysis is not affected by outliers.

Figure 10. Histogram of Regression Standardized Residual when Dependent Variable is Original Thinking

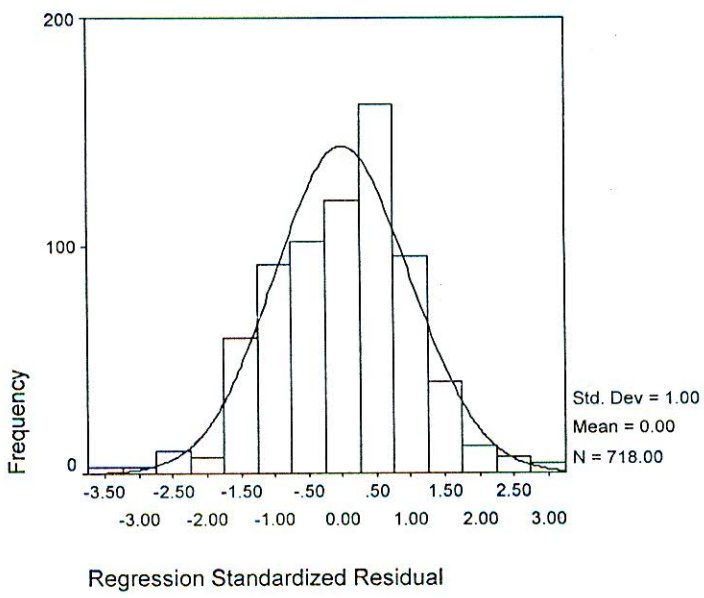


Figure 11. Normal P-P Plot of Regression Standardized Residual when Dependent Variable is Original Thinking

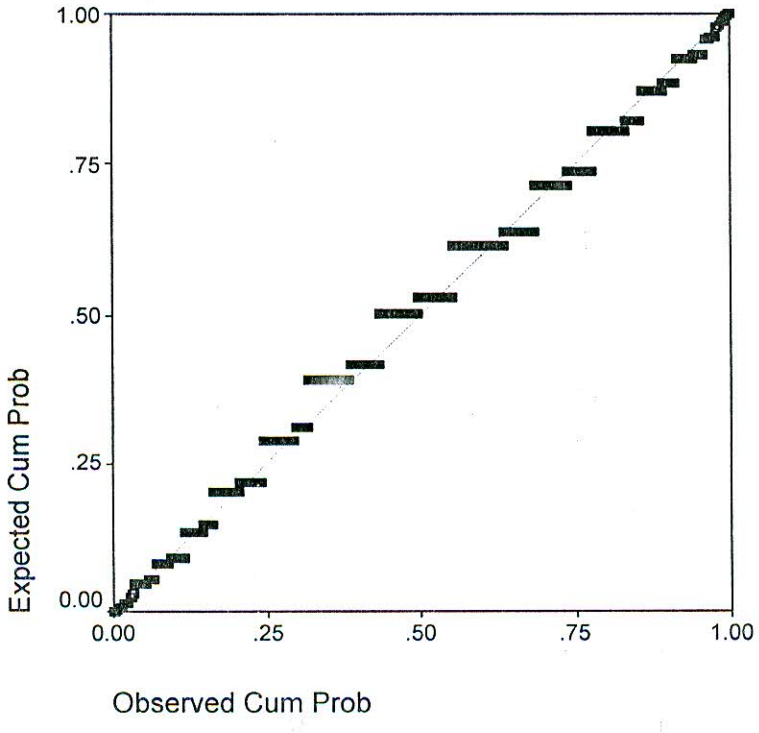


Table 49. Model Summary of Multiple Regression Analysis when Dependent Variable is Personal Relation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.323[a]	.105	.103	3.97	
2	.380[b]	.145	.142	3.89	
3	.430[c]	.185	.182	3.80	
4	.467[d]	.218	.213	3.72	1.950

a. Predictors: (Constant), Single Child

b. Predictors: (Constant), Single Child, Two Children

c. Predictors: (Constant), Single Child, Two Children, Lower Middle Class

d. Predictors: (Constant), Single Child, Two Children, Lower Middle Class, Middle Born

Table 50. ANOVA Table of Multiple Regression Model when Dependent Variable is Personal Relation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1320.091	1	1320.091	83.596	.000[a]
	Residual	11306.539	716	15.791		
	Total	12626.630	717			
2	Regression	1826.955	2	913.478	60.477	.000[b]
	Residual	10799.674	715	15.104		
	Total	12626.630	717			
3	Regression	2337.601	3	779.200	54.072	.000[c]
	Residual	10289.029	714	14.410		
	Total	12626.630	717			
4	Regression	2749.194	4	687.299	49.612	.000[d]
	Residual	9877.435	713	13.853		
	Total	12626.630	717			

a. Predictors: (Constant), Single Child

b. Predictors: (Constant), Single Child, Two Children

c. Predictors: (Constant), Single Child, Two Children, Lower Middle Class

d. Predictors: (Constant), Single Child, Two Children, Lower Middle Class, Middle Born

Table-49 and Table-50 reveal model summary of multiple regression analysis with level of significance, where dependent variable is personal relation. Table-49 shows values of R Square are increasing with inclusion of different levels of independent variables. Birth order (middle born), family size (single child, two children) and SES (lower middle class) could explain 21.8 % (21.3% in population) of personal relation of the subjects which is highly significant ($p < 0.01$). The value of Durbin – Watson test had been found 1.950 (close to value 2) which indicates independency of the data points as free from time series. However, 88.2% (88.7% in population) of personal relation could not be explained by the independent variables of the present study. Result tells the presence of other variables which had been not included in the present study, but influence personal relation.

Table 51. Coefficients of Multiple Regression Model when Dependent Variable is Personal Relation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.820	.153		174.958	.000
	Single Child	-5.537	.606	-.323	-9.143	.000
2	(Constant)	27.626	.205		135.058	.000
	Single Child	-6.343	.608	-.370	-10.426	.000
	Two Children	-1.742	.301	-.206	-5.793	.000
3	(Constant)	28.232	.224		125.888	.000
	Single Child	-6.607	.596	-.386	-11.086	.000
	Two Children	-1.974	.296	-.233	-6.663	.000
	Lower Middle Class	-1.972	.331	-.203	-5.953	.000
4	(Constant)	29.804	.363		82.209	.000
	Single Child	-8.205	.654	-.479	-12.551	.000
	Two Children	-3.575	.413	-.422	-8.654	.000
	Lower Middle Class	-1.816	.326	-.187	-5.568	.000
	Middle Born	-2.329	.427	-.265	-5.451	.000

Table 52. Confidence Interval (95%) of Coefficients when Dependent Variable is Personal Relation

Model		95% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	26.519	27.121
	Single Child	-6.726	-4.348
2	(Constant)	27.224	28.028
	Single Child	-7.538	-5.149
	Two Children	-2.332	-1.151
3	(Constant)	27.792	28.673
	Single Child	-7.777	-5.437
	Two Children	-2.556	-1.392
	Lower Middle Class	-2.623	-1.322
4	(Constant)	29.092	30.515
	Single Child	-9.489	-6.922
	Two Children	-4.386	-2.764
	Lower Middle Class	-2.456	-1.175
	Middle Born	-3.168	-1.490

Table-51 shows coefficients of multiple regression analysis when dependent variable is personal relation. Stepwise method included Birth order (middle born), family size (single child, two children) and SES (lower middle class) in 4th stage of the model. Middle born, single child, two children and lower middle class had negative effect on personal relation (β = -2.329, β = -8.205, β = -3.575 and β = -1.816). Standardized coefficients of β show different strength of levels of independent variables as single child (-0.479) > two children (-0.422) > middle born (-0.265) > lower middle class (-0.187). Table-52 reveals lower and upper value of each β with 95% confidence interval.

Table 53. Collinearity Statistics in Multiple Regression Model when Dependent Variable is Personal Relation

Model		Collinearity Statistics	
		Tolerance	VIF
1	Single Child	1.000	1.000
2	Single Child	.948	1.055
	Two Children	.948	1.055
3	Single Child	.942	1.061
	Two Children	.931	1.074
	Lower Middle Class	.981	1.020
4	Single Child	.753	1.328
	Two Children	.461	2.171
	Lower Middle Class	.973	1.028
	Middle Born	.465	2.151

Table 54. Residuals Statistics in Multiple Regression Model when Dependent Variable is Personal Relation

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	19.78	29.80	26.47	1.96	718
Residual	-15.60	12.53	-2.01E-15	3.71	718
Std. Predicted Value	-3.413	1.705	.000	1.000	718
Std. Residual	-4.191	3.365	.000	.997	718

Table-53 and Table-54 represent collinearity and residuals statistics respectively in measuring personal relation. Minimum value of tolerance with highest value of VIF (Variance Inflation Factor) at collinearity statistics had been found in the level of family size (two children) as 0.461 (more than value 0.4) and 2.171 (less than value 5) respectively. The result indicates independent variables are not multicollinear and therefore, distort free. Table-54 shows minimum and maximum standardized residual value as -4.191 and 3.365 (within +/- 5) respectively. The result indicates that analysis is not affected by outliers.

Figure 12. Histogram of Regression Standardized Residual when Dependent Variable is Personal Relation

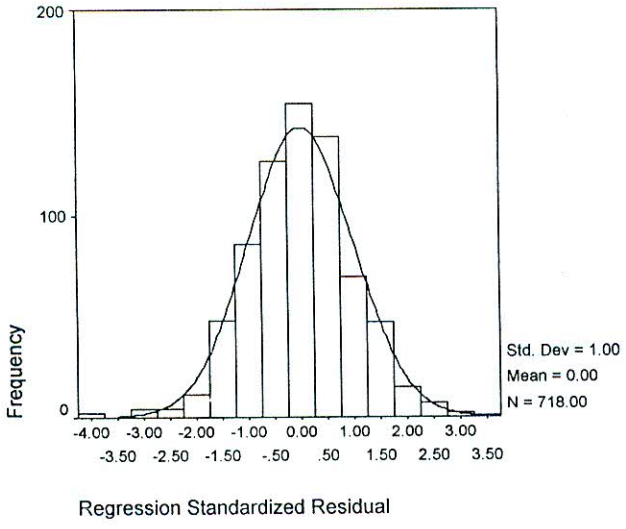


Figure 13. Normal P-P Plot of Regression Standardized Residual when Dependent Variable is Personal Relation

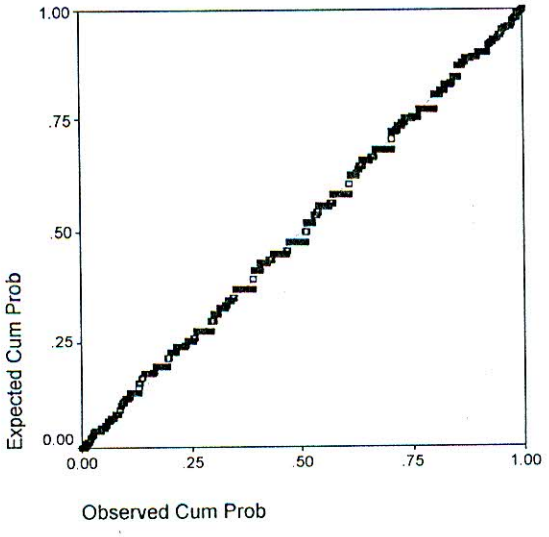


Table 55. Model Summary of Multiple Regression Analysis when Dependent Variable is Vigour

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.239[a]	.057	.056	4.58	
2	.279[b]	.078	.075	4.53	
3	.341[c]	.116	.112	4.44	
4	.415[d]	.172	.167	4.30	
5	.428[e]	.183	.177	4.27	1.950

a. Predictors: (Constant), Single Child

b. Predictors: (Constant), Single Child, First Born

c. Predictors: (Constant), Single Child, First Born, More Than Two Children

d. Predictors: (Constant), Single Child, First Born, More Than Two Children, Last Born

e. Predictors: (Constant), Single Child, First Born, More Than Two Children, Last Born, Upper Middle Class

Table 56. ANOVA Table of Multiple Regression Model when Dependent Variable is Vigour

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	909.038	1	909.038	43.396	.000[a]
	Residual	14998.429	716	20.948		
	Total	15907.467	717			
2	Regression	1235.127	2	617.564	30.095	.000[b]
	Residual	14672.339	715	20.521		
	Total	15907.467	717			
3	Regression	1846.877	3	615.626	31.262	.000[c]
	Residual	14060.590	714	19.693		
	Total	15907.467	717			
4	Regression	2733.421	4	683.355	36.984	.000[d]
	Residual	13174.046	713	18.477		
	Total	15907.467	717			
5	Regression	2911.688	5	582.338	31.905	.000[e]
	Residual	12995.778	712	18.252		
	Total	15907.467	717			

a. Predictors: (Constant), Single Child

b. Predictors: (Constant), Single Child, First Born

c. Predictors: (Constant), Single Child, First Born, More Than Two Children

d. Predictors: (Constant), Single Child, First Born, More Than Two Children, Last Born

e. Predictors: (Constant), Single Child, First Born, More Than Two Children, Last Born, Upper Middle Class

Table-55 and Table-56 reveal model summary of multiple regression analysis with level of significance, where dependent variable is vigour. Table-55 shows values of R Square are increasing with inclusion of different levels of independent variables. Birth order (first born and last born), family size (single child and more than two children) and SES (upper middle class) could explain 18.3 % (17.7% in population) of vigour of the subjects which is highly significant ($p < 0.01$). The value of Durbin – Watson test had been found 1.950 (close to value 2) which indicates independency of the data points as free from time series. However, 81.7% (82.3% in population) of vigour could not be explained by the independent variables of the present study. Result tells the presence of other variables which had been not included in the present study, but influence vigour.

Table 57. Coefficients of Multiple Regression Model when Dependent Variable is Vigour

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.421	.177		149.648	.000
	Single Child	-4.595	.698	-.239	-6.588	.000
2	(Constant)	25.900	.218		118.699	.000
	Single Child	-5.527	.729	-.288	-7.582	.000
	First Born	1.452	.364	.151	3.986	.000
3	(Constant)	24.566	.321		76.555	.000
	Single Child	-4.880	.723	-.254	-6.746	.000
	First Born	2.140	.378	.223	5.666	.000
	More Than Two Children	2.024	.363	.215	5.574	.000
4	(Constant)	21.393	.554		38.644	.000
	Single Child	-4.149	.709	-.216	-5.855	.000
	First Born	4.582	.508	.477	9.019	.000
	More Than Two Children	4.312	.483	.458	8.936	.000
	Last Born	3.989	.576	.367	6.927	.000
5	(Constant)	21.152	.556		38.069	.000
	Single Child	-4.156	.704	-.216	-5.901	.000
	First Born	4.761	.508	.495	9.369	.000
	More Than Two Children	4.383	.480	.466	9.128	.000
	Last Born	3.706	.579	.341	6.397	.000
	Upper Middle Class	1.584	.507	.113	3.125	.002

Table 58. Confidence Interval (95%) of Coefficients when Dependent Variable is Vigour

Model		95% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	26.075	26.768
	Single Child	-5.964	-3.226
2	(Constant)	25.472	26.329
	Single Child	-6.958	-4.096
	First Born	.737	2.168
3	(Constant)	23.936	25.196
	Single Child	-6.300	-3.460
	First Born	1.398	2.881
	More Than Two Children	1.311	2.738
4	(Constant)	20.306	22.480
	Single Child	-5.540	-2.758
	First Born	3.584	5.579
	More Than Two Children	3.365	5.260
	Last Born	2.858	5.119
5	(Constant)	20.061	22.243
	Single Child	-5.538	-2.773
	First Born	3.763	5.759
	More Than Two Children	3.440	5.326
	Last Born	2.569	4.844
	Upper Middle Class	.589	2.580

Table-57 shows coefficients of multiple regression analysis when dependent variable is ascendancy. Stepwise method included birth order (first born and last born), family size (single child and more than two children) and SES (upper middle class) in 5^{th} stage of the model. First born, last born, more than two children and upper middle class had positive effect on vigour (β = 4.761, β = 3.706, β = 4.383 and β = 1.584) whereas, negative effect had been found with single child (β = - 4.156). Standardized coefficients of β show different strength of levels of independent variables as first born (0.495) > more than two children (0.466) > last born (0.341) > single child (-0.216) > upper middle class (0.113). Table-58 reveals lower and upper value of each β with 95% confidence interval.

Table 59. Collinearity Statistics in Multiple Regression Model when Dependent Variable is Vigour

Model		Collinearity Statistics	
		Tolerance	VIF
1	Single Child	1.000	1.000
2	Single Child	.897	1.115
	First Born	.897	1.115
3	Single Child	.874	1.144
	First Born	.802	1.248
	More Than Two Children	.832	1.203
4	Single Child	.855	1.170
	First Born	.416	2.407
	More Than Two Children	.442	2.262
	Last Born	.413	2.420
5	Single Child	.855	1.170
	First Born	.410	2.438
	More Than Two Children	.441	2.267
	Last Born	.403	2.481
	Upper Middle Class	.877	1.140

Table 60. Residuals Statistics in Multiple Regression Model when Dependent Variable is Vigour

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	21.76	31.88	26.13	2.02	718
Residual	-16.24	10.47	-1.46E-15	4.26	718
Std. Predicted Value	-2.168	2.855	.000	1.000	718
Std. Residual	-3.802	2.450	.000	.997	718

Table-59 and Table-60 represent collinearity and residuals statistics respectively in measuring vigour. Minimum value of tolerance with highest value of VIF (Variance Inflation Factor) at collinearity statistics had been found in last born as 0.403 (more than value 0.4) and 2.481 (less than value 5) respectively. The result indicates independent variables are not multicollinear and therefore, distort free. Table-60 shows minimum and maximum standardized residual value as -3.802 and 2.450 (within +/- 5) respectively. The result indicates that analysis is not affected by outliers.

Figure 14. Histogram of Regression Standardized Residual when Dependent Variable is Vigour

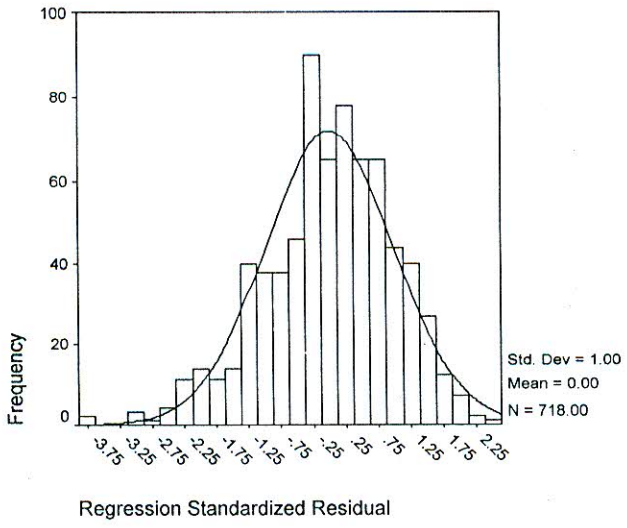


Figure 15. Normal P-P Plot of Regression Standardized Residual when Dependent Variable is Vigour

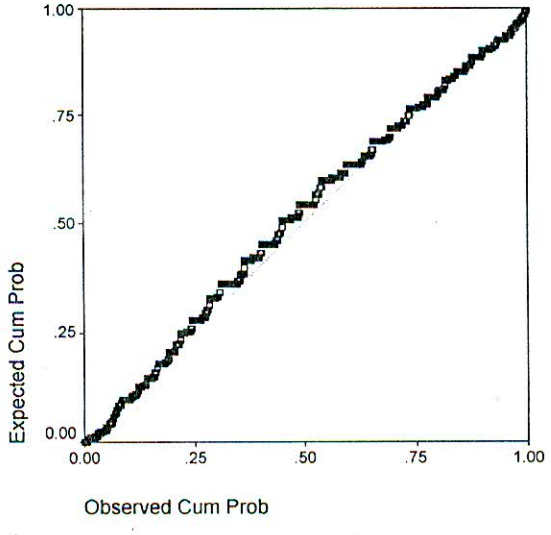


Table 61. Summary of Multiple Regression Analysis

Dependent Variables	Levels of Independent Variables	Coefficients	R square
Ascendancy	First Born	+ 9.423*	0.452*
	Middle Born	+ 4.328*	
	Single Child	- 4.869*	
	Upper Middle Class	+ 3.340*	
Responsibility	First Born	+ 4.363*	0.229*
	Single Child	- 3.433*	
	Lower Middle Class	- 1.550*	
Sociability	Middle Born	- 2.889*	0.154*
	More than two Children	+ 5.633*	
	Middle Class	- 1.006*	
Original Thinking	First Born	+ 0.776*	0.011*
Personal Relation	Middle Born	- 2.329*	0.218*
	Single Child	- 8.205*	
	Two Children	- 3.575*	
	Lower middle Class	- 1.816*	
Vigour	First Born	+ 4.761*	0.183*
	Last Born	+ 3.706*	
	Single Child	- 4.156*	
	More than two Children	+ 4.383*	
	Upper Middle Class	+ 1.584*	
Emotional Stability	Not Found		
Cautiousness	Not Found		

*** (p < 0.01)**

CHAPTER - IV

DISCUSSION

DISCUSSION

The present study has been designed to discover effect of birth order, family size and socio economic status (SES) on military leadership potentials. Studies have evidenced that personality traits are involved in leadership competence and behavior (Stogdill, 1948; Mann, 1959; Lord, De Vader & Alliger, 1986; Judge & Bono, 2000). Multidimensional traits were measured to assess military leadership potentials. The traits, which were considered as military leadership potentials: ascendancy, responsibility, emotional stability, sociability cautiousness, original thinking, personal relations and vigour. The Bengali version of Gordon Personality Profile (GPP) and Gordon Personality Inventory (GPI) were used to measure military leadership potentials. The study has identified some of the family structure and environment related factors (birth order, family size and SES) influence these military leadership potentials. These potential traits are likely to persist for long time, even after commission, as because, personality traits are remarkably stable (McCrae & Costa, 1990).

ASCENDANCY:

The individuals who are verbally ascendant, who adopt an active role in the group, who are self-assured and assertive in relationships with others and who tend to make independent decision, possess ascendancy (Gordon, 1963). In measuring ascendancy, result showed (Table – 26) that birth order (first born and middle born), family size (single child) and socio economic status (upper middle class) explained 45.2% of the ascendancy which had been found highly significant ($p < 0.01$). The coefficients (Table – 28) of first born and middle born had been found as 9.423 and 4.328 respectively with high level of significance ($p < 0.01$). The coefficient of single child was - 4.869 and upper middle class was 3.340. Both of the coefficients had been found highly significant ($p < 0.01$). The result indicates first born and middle born individuals possess better ascendancy trait than last born. Within first born and middle born individuals, first born

individuals hold better level of ascendancy. Regarding family size, present findings indicate that the individuals of single child families possess comparatively low level of ascendancy than the individuals of two children and more than two children families.

Snow, Jacklin, and Maccoby, (1981), found that assertiveness in frustrating situations was highest in first-borns, and lowest in later-borns. This research finding supports present result regarding birth order, where firstborn showed highest ascendancy. Different studies also showed that oldest children are usually domineering (Perlin & Grater, 1984; Phillips, Bedeian, Mossholder & Touliatos, 1988).

Concerning family size, one study showed that family friction tends to be high in large family (Dybwad, 1959). That may be one of the reasons which makes an individual of single child family as less practiced to dominate near aged siblings.

The individuals of upper middle class family showed better ascendancy than the individuals of middle class and lower middle class families. Study demonstrated admired personality traits of the ancestors are held before upper class children in their impressionable years (Ruth, 1963). That may influence upper middle class individuals to become more self assertive.

The result of multiple regression analysis in measuring ascendancy shows the model as:

$$\boldsymbol{Ascendancy} = 20.26 + First\ Born\ .(+\ 9.423) + Middle\ Born\ .(+\ 4.328) + Single\ Child.(-\ 4.869) + Upper\ Middle\ Class\ .(+\ 3.340)$$

The result partially supports hypothesis of the present study. First Born and upper middle class individuals had the positive impact on ascendancy (H_1 and H_3). Single child had significant negative impact on ascendancy which

partially supports H_2. In addition, middle born had also possessed positive impact on ascendancy.

The value of Durbin – Watson test had been found 2.114 (close to value 2) which indicate independency of the data points that are free from time series. The data had been collected for 1 year duration, but it was not influenced by the time.

RESPONSIBILITY:

Trust and confidence in top leadership was the single most reliable predictor of followers' satisfaction (Blake & Mouton, 1985). The analysis of data in measuring responsibility showed that birth order (first born), family size (single child) and SES (lower middle class) could explain 22.9% of individuals responsibility (Table – 32), which was found highly significant ($p < 0.01$). Coefficients of Multiple Regression Model (Table – 34) in measuring responsibility showed first born had positive effect on responsibility ($\beta = 4.363$) whereas, negative effect had been found with single child and lower middle class ($\beta = -3.433$ and $\beta = -1.550$).

Individuals who are able to stick to any job assigned to them, who are preserving and determined, and who can be relied on, holds responsibilities (Gordon, 1963). From very beginning when second child of the family born, first born behaves in a matured fashion because of his association with adults and because he is expected to assume responsibilities (Hurlock, 1979). Parents are usually expecting matured and sensible behaviour from the first born. First born were found reliable than other born individuals. On the other hand, individuals from single child families and lower middle class families were found less responsible than the individuals of two or more than two children families and the family with comparatively high SES. Parents are usually expecting matured and sensible behaviour from the first born. Later born have fewer responsibilities

than firstborn (Hurlock 1979). The oldest-born have been reported to take more household, interpersonal and other responsibilities for their actions (Falbo, 1981). Falbo theorized that oldest children had probably developed this sense of responsibility because they were more often put in charge and the only because they had no one else to blame things on. Similarly, Phillips and Phillips (1994) found that first born children tend to attribute others' work performance to internal factors compared to later-borns. First-born weight lifters showed a more internal locus-of-control as well as a greater need for achievement than later-borns (Hall, Church, & Stone, 1980). Among alumni of a social work college, first-born felt they had too much responsibility toward their families, whereas later-born males identified more with the role of the infantilized child (Lackie, 1984). Other research also supports the idea that first-borns children demonstrate more responsibility than later-borns (Hansson, Chernovetz, Jones, & Stortz, 1978; Howarth, 1980).

The previous research findings support the result of present study in relation to birth order and responsibility. In a study it was found that family size–education relationship became negative during the low fertility period, but level of children's education was not found to be associated with family size during the high fertility period (Razzaque et al, 2006). That indicates some factors which interact with family size in our culture in achieving education in our culture. If we consider positive association and relation between moral values and responsibility, it has been established that a man is homosexual is negatively related to his number of brothers in western settings (William, 2004).

The result of the present study shows individuals from lower middle class families possess fewer responsibilities than the individuals of other classes. In a study of Blue-Collar Marriage (lower middle class), a husband was asked, Does your wife take an interest in your job?" He replied, "I don't take much interest in it myself so I wouldn't expect her to (Mirra, 1964). Immaturity is also correlated with low socioeconomic status (Nakao et al, 2000).

The result of multiple regression analysis in measuring responsibility shows the model as:

$$\boldsymbol{Responsibilit} = 26.69 + \textit{First Born}\,.\,(+\,4.363) + \textit{Single Child}.\,(-\,3.433) + \textit{Lower Middle Class}\,.\,(-\,1.550)$$

The result partially supports hypothesis of the present study. First Born individuals had the positive impact on responsibility (H_1). Single child had significant negative impact on responsibility which partially supports H_2. Lower middle class had significant negative effect on responsibility which also partially supports H_3.

SOCIABILITY:

The analysis of data in measuring sociability showed that birth order (middle born), family size (more than two children) and SES (middle class) could explain 15.4% of individuals sociability (Table – 38), which had been found statistically significant ($p < 0.01$). The coefficients of multiple regression model shows (Table – 40) that middle born and middle class had significantly negative effect on sociability (β = -2.889 and β = -1.006) whereas, significant positive effect had been found with persons coming from more than two children families (β = 5.633).

The individuals, who like to be with, share with people and who are social, hold sociability (Gordon, 1963). The individuals from more than two children family were found most social in this aspect. On the other hand, the middle born of the family were found facing difficulties in maintaining social interaction than first born and last born individuals. Snow, Jacklin, and Maccoby, (1981) however, found that sociability, as well as assertiveness in frustrating situations, was highest in first-borns. The middle class individuals were also shown low sociability than upper middle class and lower middle class individuals.

The habits of many middle born are motivated by the fact that they have never been truly in the spotlight (Harris, 2006), that may be one of the indicators of a middle born individual, less involved in social activities. The research on sociability and birth order concluded that last-borns were the most sociable (Segal, 1978), perhaps because they were not likely to win at competitions (due to their younger age and lower competency) and thus developed a more adaptive affiliative orientation. Singh (1985) also reported that last-borns were more extroverts. Schneider (1981) & Falbo (1977) found that only children had lower Social Interest. These research evidences also in disfavour of single child as an extroverted social individual. The result of the present study in measuring sociability also showed similar reflection where single child individuals possessed less sociability. The child who grows up in a large family never has to be lonely and with a number of siblings to choose from, he can usually find at least one who is congenial and companionable. As a result, he learns to be social and to enjoy social activities (Hurlock, 1979).

The social activities of an individual do not depend only on family size. Different factors may influence it. Lack of adequate supervision and guidance, especially when the mother must work to help meet family needs, leads to undisciplined behavior in school, antisocial behavior outside of school, and personality maladjustments (Hurlock, 1979). The problem is greater for children from large families than for those from smaller families (Hurlock, 1979). Thus, family size and SES interacts to influence social behavior. This indicates the influence of socio economic status of the family which may influence social adjustment. However, most of the subjects of the present study were of urban background. In the urban area, most of the time, middle class parents are busy with their profession and they tend to emphasize the respectability of their jobs and their styles of life. This respectability makes middle class superior (Joseph, 1964). Competitive attitude may render unsocial pattern within the personality

of middle class individuals. That may be one reason that individuals from middle class families showed less sociability in the present study.

The result of multiple regression analysis in measuring sociability shows the model as:

$$\boldsymbol{Sociability} = 24.01 + Middle\ Born\ .(-2.889) + More\ than\ two\ children\ .(+5.633) + Middle\ Class\ .(-1.006)$$

The result partially supports hypothesis of the present study. Middle Born individuals had the negative impact on sociability comparing with first born and last born individuals which indicates first born and last born individuals are at least better than middle born individuals in social interactions (H_1). Individuals of more than two children family had shown significantly better sociability in the present study, which does not support H_2. Present research has been conducted only on adolescent sample. Developmental stages may be one of the factor which influences sociability. A research showed that only one child in a family possesses unsocial attitudes at the very beginning of school life but improves later on (Messer, 1968). Individuals with middle class status had significantly negative effect on sociability which also partially supports H_3 by indicating upper middle class and lower middle class individuals are jointly better than middle class individuals in developing social relations.

ORIGINAL THINKING:

The Individuals who like to work on difficult problems, intellectually curious, enjoy thought provoking questions and discussion, like to think about new ideas are retaining "original thinking' (Gordon, 1963). The result of present study indicated birth order (first born) could explain 01.1% of individuals' original thinking (Table- 44), which had been found significant at 0.004 level (Table – 45). The coefficients of multiple regression model shows (Table – 46) first born had

significant positive effect (p=0.004) on original thinking (β = 0.776). The result indicates that first born enjoys practicing some intellectual process than other born. Helson (1968) found the whole achievement is greater among first than later borns in the same family. Intellectual performance may be one of the reasons for greater achievement for the first born. This states that because firstborns only have adult company about them in their early years, they will spend the initial years of their life interacting on a high intellectual plane (Zajonc, 2001). Regarding vocabulary comprehension, first-born children were found better than later-born children (Berglund, et al 2005). There is no doubt that any type of comprehension is related with intellectual ability, which supports the result of present study. Firstborn children are overrepresented among Nobel Prize winners (Clark & Rice, 1982) classical music composers (Schubert, Wagner & Schubert, 1977) and prominent psychologists (Terry, 1989). Indeed, a study of 314 eminent 20th century personalities found that 46% of them were firstborn children (Goertzel, Goertzel, & Goertzel, 1978; See Simonton, 1984/1999 p. 26-27 and Simonton, 1999, p. 133 for reviews). Norway National Institute of Occupational Health and Norwegian Armed Forces Medical Service have jointly conducted a research and established the IQ of first borns is usually higher than other borns (Daily Amar-Desh, 2007). All these successes of first born support the result of present study in measuring original thinking.

The result of multiple regression analysis in measuring original thinking shows the model as:

$$\boldsymbol{Original\ Thinking} = 23.97 + First\ Born\ .(+\ 0.776)$$

The above result supports hypothesis H_1, first born individuals like to work at difficult problems and intellectually curious, which is one of the potential trait, required to be a military leader. But, hypothesis - H_2 and H_3 are not supported by the results. That means; family size and socio economic status do not have any impact on original thinking.

PERSONAL RELATION:

In measuring personal relation, result showed (Table – 49) that birth order (middle born), family size (single child and two children) and socio economic status (lower middle class) explained 21.8% of the personal relation which had been found significant ($p < 0.01$). The coefficients of multiple regression model shows (Table – 51) birth order (middle born), family size (single child and two children) and socio economic status (lower middle class) had significant negative effect ($p < 0.001$) on personal relation. The coefficient values were found as β (middle born) = -2.329, β (single child) = -8.205, β (two children) = -3.575, β (lower middle class) = -1.816 respectively.

The result indicates first born and last born individuals possess better personal relation trait than middle born. The individuals from more than two children family hold better personal relation than individuals from two children families, individuals from two children family hold better personal relation than individuals from single child families and the individuals from upper and middle class families possess better personal relation than the individuals from lower middle class families.

The individuals who have great faith and trust in people, who are tolerant, patient and understanding usually maintains 'personal relations' (Gordon, 1963). Research findings suggested that individuals scoring high on both task-oriented and relations-oriented behaviour perform better as leaders (Blake and Mouton, 1964).

Schneider (1981) found that only children had lower Social Interest Scale scores than first, second or middle-borns. Studies also showed that deprived of opportunities to learn to get along with real people at the preschool age when only child's peers are learning social skills, individuals of only child families seem

unsocial to their peers later when they have opportunities for companionship (Hall, 1907; Messer, 1968)

Regarding family size and socio economic status, present research findings somehow differ with earlier researches. Studies showed family friction tend to be high in large family (Dybwad, 1959). On the other hand, ample evidence that the kind of personality pattern the only child develops, even though distinctive, has many characteristics that lead to good personal and social adjustment (Aldous, 1967; Burke, 1956; Tuckman and Regan, 1967). Children who grow up in large families tend to make poorer personal and social adjustments (Hurlock, 1979). Only children do not develop jealousies and envies, nor are they made to feel inadequate by constant comparison with siblings (Aldous, 1967, Tolchin, 1959). The result of present study in measuring personal relation does not commensurate with theoretical framework. The result in measuring personal relation showed opposite ideas where, individuals from more than two children showed better personal relations than the individuals of single child and two children family. All the samples of this study were adolescents and personal relation could be influenced by this factor. Studies showed that the interactions between siblings may differ in different stages of life (Lynn, 2001). The economic condition of most of our families compiles individuals to share everything with their siblings comparing with western countries. In addition, social values to be united, may render skills and positive attitudes regarding personal relation in the individuals of a large family in our country.

Different studies regarding socio economic status illustrated that maximum proportion of the lower class had no intimate friends (Robert, 1929; Lloyd,et.al, 1941; Mirra,et.al, 1964), on the other hand, The upper class in any local community is, relative to other strata, small and cohesive (Joseph, 1964). Cecil & Paul (1947) and Sydney & Peter (1965), lower-class youth were found to

be much less familiar with their grandfathers, which commensurate with the findings of the present study.

The result of multiple regression analysis in measuring personal relation shows the model as:

$$\boldsymbol{Personal\ Relation} = 29.80 + Middle\ Born\ .(-2.329)$$

$$+ Single\ Child\ .(-8.205) + Two\ children\ .(-3.575) +$$
$$Lower\ Middle\ Class\ .(-1.816)$$

The above result partially support hypothesis H_1, first born and last born individuals were found better in maintaining personal relations than middle born individuals. The result also to some extent supports hypothesis - H_2 by discovering the fact that individuals from two children families are at least better regarding personal relation than the individuals of single child families. H_3 has been also partially supported by the result as the individuals of upper middle class and middle class status are better than the individuals of lower middle class status on the subject of personal relation.

The nature of personal relation may also vary in different ages. One research finding related with personal relation of siblings showed sibling relationship decline significantly during early adulthood, but proximity and contact stabilize in middle age and do not decline further, whereas sibling exchange demonstrates a slight rise after approximately age 70 (Livesley et al, 1993).

VIGOUR:

The analysis of data in measuring vigour showed (Table – 55) that birth order (first born and last born), family size (single child and more than two children) and SES (upper middle class) could explain 18.3% of individuals vigour, which had been found statistically significant ($p < 0.01$). Coefficients of Multiple

Regression Model in measuring vigour showed (Table – 57) first born (β = 4.761), last born (β = 3.706), more than two children (β = 4.383) and upper middle class (β = 1.584) had positive effect on vigour. Whereas, negative effect had been found with single child (β = - 4.156). All the coefficients had been found significant ($p < 0.01$).

The individuals who like to work and move rapidly, who are able to accomplish more than the average person and who are energetic hold vigour (Gordon, 1963). Earlier research showed firstborn children are overrepresented among Nobel Prize winners (Clark & Rice, 1982). Intelligence and hard work, both are required to achieve such type of extraordinary success. The coefficients of different levels of birth order indicates first born (β = 4.761) and last born (β = 3.706) possess better vigour than middle born (no significant effect had been found for middle born in measuring vigour). In a study it was found that middle born develops the habit of being an underachiever as a result of fewer parental expectations and less pressure to achieve (Hurlock, 1976). Few research findings had been found in favour of later borns for achieving leadership qualities (Sulloway, 1996; 1999; Simonton, 1984/1999, 1999).

Regarding family size, result also showed the individuals who are from more than two children family are usually more vigourous. The individuals' life pattern starts with competition with siblings in a family where more than two children exist. Concerning family size, one study shows family friction tends to be high in large family (Dybwad, 1959). This friction may lead an individual more competitive and as a result it may develop high level of vigour. The individuals of single child families had been found less vigourous in the present study. The loneliness of only children encourages the habit of daydreaming, which usually weakens their motivation to achieve what they are capable of achieving and almost always makes social adjustments difficult (Messer, 1968).

Considering the socio economic status of a family, result showed that individuals from upper middle class families obtained significantly high score in measuring vigour. Although by far the smallest of the various social classes, the upper middle class is a tremendously powerful and influential segment of the population. The upper class young have typically less chance of avoiding to conform to family dictates (such as marring out side the elite circle) and they have more to gain by helping their kin maintain their positions (William, 1964).

The result of multiple regression analysis in measuring vigour shows the model as:

$$\boldsymbol{Vigour} = 21.15 + First\ Born\ .(+4.761) + Last\ Born\ .(+3.706) + Single\ Child\ .(-4.156) + More\ than\ two\ children\ .(+4.383) + Upper\ Middle\ Class\ .(+1.584)$$

The above result supports hypothesis H_1, first born individuals had significant tendency to score high in vigour. The result also to some extent supports hypothesis - H_2 by discovering the fact that individuals from two children families are at least better regarding vigour than the individuals of single child families. H_3 has been also supported by the result as the individuals of upper middle class status are better than in vigour.

EMOTIONAL STABILITY AND CAUTIOUSNESS:

Stepwise multiple regression analysis of the study could not illustrate any significant impact of birth order, family size and SES on emotional stability and cautiousness. The individuals, who are well-balanced, emotionally stable and relatively free from anxiety and tension, possess emotional stability (Gordon, 1963). Emotional stability is essentially a measure of anxiety versus well being, where emotions are controlled rather than highly variable (Dyer, 1984). On the other hand, Individual who considers matters very carefully before making decision and do not like to take chances or risks, are generally cautious people

(Gordon, 1963). The definitions reflect that emotional stability and cautiousness are correlated.

It has been also found that the impact of family environment on personality traits differs trait by trait (Livesley et al, 1993). Anantharman (1981) found no difference in the anxiety levels of first-borns and later-borns. Another study, however, found no birth order effect on neuroticism or extroversion (Shaughnessy, Neely, Manz, & Nystul, 1990). One study (Gates, Limberger, Crockett, and Hubbard,1988) reported first-borns as having less trait anxiety with girls exhibiting more anxiety than did boys overall which has been pointed another variable (sex) that interacts with birth order, whereas present study had included male subjects only.

CONCLUSION

The key objective of the present study was to discover relations between few family factors and military leadership potentials. Basically, personality is a dynamic organization of psycho-physical systems that determines individuals' behaviours and thoughts. Previous discussion showed that basic elements of personality are personality traits, which are relatively stable. These traits are basically psycho-physical in nature as because they are influenced by the environment and at the same time possesses biological basis. Within personality, these traits work together and form an organization. This organization is not constant, rather flexible and dynamic. The intensity of each trait may vary within this organization to adjust with changeable environment. The tendency to maintain a certain level or intensity is relatively stable. That indicates individuals become trained or habituated to maintain a certain level of intensity of the traits to adjust with most of the situations.

The researcher assumed that the biological basis of human beings is not easy to determine. Among the environmental factors, only the influence of birth order, family size and socio economic status were the major concerns of the present study.

In this study the Ascendancy, responsibility, emotional stability, sociability, cautiousness, original thinking, personal relation and vigour were measured as military leadership potentials. Birth order was divided into three levels as first born, middle born and last born. Family size consisted of three levels as single child, two children and more than two children. On the other hand, lower middle class, middle class and upper middle class were the three different levels of socio economic status (SES).

The candidates who appeared ISSB were randomly selected as the subjects of the present study and the design of the research was set as a

correlational study. Cronbach (1957) who examined in detail the relation between experimental and correlational disciplines in Psychology wrote:

"Nature has been experimenting since the beginning of the time, with a boldness and complexity far beyond the resources of science. The coorelator's mission is to observe and organize the data of nature's experiments."

Stepwise multiple regression analysis on collected data was administered to serve the objectives. The hypothesis of the present study was set that individuals who are first born, from two children families; and who possess upper middle class status would hold better military leadership potentials. Result showed that birth order, family size and socio economic status influence ascendancy, responsibility, sociability, original thinking, personal relation and vigour in different ways. Any certain level of any independent variable was found not maintaining constant effect on all the military leadership potentials.

A potential military leader must have to achieve adequate level of few specific traits (military leadership potentials) which are very much required to be a military leader. The individuals with limitation in any of these traits are not accepted for military services, which indicate if a person is very good in any specific military leadership potential, but weak in another, is not suitable for military. One prospective military leader must have to attain at least an adequate level in all the military leadership potentials. The basic question of the present study was:

If the findings of the casual observation which had been supported by the theoretical framework, were not accidental, then what are the impacts of birth order, family size and socio economic status on the selection of candidates?

Systematic conduct of research has discovered that findings of the casual observation should not be generalized. Individuals who are first born, who are from two children families and who possesses upper middle class status, are not good in all military leadership potentials but in few.

The effects of birth order, family size and SES on few selected military leadership potentials have been summarized in the following self exploratory table:

Table 62. Effects of Different Levels of Independent Variables on Dependent Variables

Independent Variables	Levels of Independent Variables	Dependent Variables	
		Tendency to Score High (+) at:	Tendency to Score Low (-) at:
Birth Order	First Born	Ascendancy, Responsibility, Original Thinking & Vigour	NA
	Middle Born	Ascendancy	Sociability & Personal Relation,
	Last Born	Vigour	NA
Family Size	Single Child	NA	Ascendancy, Responsibility, Personal Relation & Vigour
	Two Children	NA	Personal Relation
	More than Two Children	Sociability, Vigour	NA
SES	Lower Middle Class	NA	Responsibility & Personal Relation
	Middle Class	NA	Sociability
	Upper Middle Class	Ascendancy, Vigour	

LIMITATIONS

Present Research was carried with few drawbacks which are described below:

a. Experimental design could not be adopted in this research as because of the presence of several independent variables. Lack of specific previous research findings created drawbacks and difficulties to control different extraneous variables. Basing on the findings of the present research, more specific experiment could be conducted in future.

b. Female candidates, cadet college candidates and the candidates who had single parent or who lived in an extended family, were intentionally excluded from the samples in order to reduce complexity. It will be difficult to predict any candidate of these natures basing on the view of present study.

c. The individuals who are motivated and applied for armed forces were the population of the present study. Therefore, it will be difficult to predict any individual in civil setup where leadership qualities are emphasized. That caused to be limited horizon of application.

d. There are numerous military leadership potentials which are required to be a military leader, but present research had dealt with very few (eight) of them. Therefore, other potentials remain unexplored in the present study.

e. Multiple Regression Analysis showed vast influences of other variables which were not included in the study. The effect of those unknown variables remain unexposed in this study.

RECOMMENDATIONS

The basic objective of the present study was to discover relation between family factors and military leadership potentials. The objective was set to support personnel selection in military services. Present study may help any form of personnel selection procedure where leadership potentials are emphasized. The findings of the present study may help the selection procedure in two ways:

First, by formulating a hypothesis from personal profile before starting the assessment of an individual. It would help the assessor to determine the traits which require more focus or concentration. One thing is important that an assessor must not be biased before assessment by using his own tools.

Secondly, after assessment the findings of the present study may aid the selection process to make a decision where doubt persists.

The key recommendations to form an assumption before conduct of tests for personnel selection are shown below:

a. Any specific level of birth order, family size and socio economic status should not be given privilege for assumption of all military leadership potentials.

b. ***Ascendancy*** of Single Child, ***Responsibility*** of Single Child and Lower Middle Class individuals, ***Sociability*** of Middle Born and Middle Class individuals, ***Personal Relation*** of Single Child, Two Children, Middle Born and Lower middle Class individuals and ***Vigour*** of Single Child should be more emphasized and exposed during assessment for selecting leaders. Common factor / factors likely to increase negativity of trait.

c. Single child with lower middle class status should be assessed carefully.

After completion of assessment if any doubt prevails or if assessor is not sure whether he should penalize an individual for any specific trait or not, following aspects may be considered:

a. ***Ascendancy*** of first born, middle born and upper middle class individuals, ***Responsibility*** of first born individuals, ***Sociability*** of the individuals who are from more than two children families, ***Original Thinking*** of first born individuals and ***Vigour*** of first born, last born, individuals from more than two children families and upper middle class individuals may be given benefit if doubt persists.

b. ***Ascendancy*** of Single Child, ***Responsibility*** of Single Child and Lower Middle Class individuals, ***Sociability*** of Middle Born and Middle Class individuals, ***Personal Relation*** of Single Child, Two Children, Middle Born and Lower middle Class individuals and ***Vigour*** of Single Child may not be given advantages, if any doubt remains.

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Appendix A-1

EXAMPLE OF A FACE VALIDITY FORM FOR THE ITEMS OF GPP AND GPI

The aim of this investigation is to measure soundness of different items of Bengali version of a personality test named "Gordon Personal Profile (GPP)" and "Gordon Personal Inventory (GPI)". Three experts from three different dimensions of ISSB have been selected to serve the purpose. The basic criterion of selecting experts was experiences regarding personnel selection in military. I am pleased to inform you that you have been chosen as one of the experts in my research. Your valuable opinion will aid my research to comment about above mentioned tests.

Zahid Hossain
Ph.D. Research Fellow
University of Rajshahi

Introduction:

GPP and GPI measure eight different personality traits. One of these eight traits is ***"Responsibility"***. Different items have been assigned by Gordon to measure ***"Responsibility"*** of the individuals. These items have been converted into Bengali. Gordon has defined ***"Responsibility"*** as: "Individuals who are able to stick to any job assigned them, who are preserving and determined, and who can be relied on, possess ***"Responsibility"***. Individuals who are unable to stick to the task that do not interest them and who tend to be irresponsible, do not possess ***"Responsibility"***.

The converted Bengali items which are related with ***"Responsibility"*** have been presented here. A five point scale is also attached with each item to collect your opinion. ***How much a single item is an indicator of "Responsibility"*** will be your key concern.

Test Items:

"Each Bengali item was presented here one after another, related with ***Responsibility*** *and one scale was attached for each item:"*

Example: যে কোন বাধার সম্মুখীন হলেও কাজটি শেষ করে নিতে পারেন

How much do you consider above statement as an indicator of ***Responsibility***? (Tick)

Very High	High	Average	Low	Very Low

Military Leadership Potential:

Considering above mentioned statements, how much these characteristics do you think are required to be a Military Officer? What is the degree of relevance of above mentioned statements considering as Military Leadership Potentials?

Very High	High	Average	Low	Very Low

(Total eight different forms of this kind for each trait had been prepared to collect information from experts.)

Appendix B

CRITERIA FOR DETERMINING SOCIO ECONOMIC STATUS

Profession of Father	Educational Qualification of Father	Educational Qualification of Mother	Monthly Income of Parents (Tk)	Numerical Weight
Agriculture / Labour	Illiterate	Illiterate	00 - 2000	01
Service Holder in a Non Reputed Organization / Small Business	Class V	Class V	2001 - 5000	02
School Teacher / 2nd Graded Officer	VI to HSC	VI to HSC	5001 – 10,000	03
Business	Graduate	Graduate	10,001 – 15,000	04
Professionals (1st Graded)	Masters	Masters	15,001 – 25,000	05
Professionals with high Status (Professor / Brigadier and above in Military /others)	M Phil or Ph D	M Phil or Ph D	25,000 +	06

নাম ঃ ..... চেষ্ট নং ঃ .....

নির্দেশাবলী (Instruction)

এই পুস্তিকায় মানুষের কতকগুলো বৈশিষ্টের বর্ণনা দেয়া আছে । এই বর্ণনাগুলো চার চারটি করে কয়েকটি গুচ্ছে ভাগ করা হয়েছে । আপনি প্রত্যেকটি গুচ্ছ পড়ুন এবং এমন একটি বর্ণনা বা বিবৃতি বের করুন যেটি আপনার বেলায় সবচেয়ে বেশী প্রযোজ্য । তারপর এই বিবৃতির পাশে + ('ব' বা সবচেয়ে বেশী) চিহ্নিত কলাম নীচের লাইন দুটোর মধ্যবর্তী শূন্য জায়গাটুকু মোটা কালো দাগ দিয়ে পুরণ করে দিন।

এখন এই গুচ্ছেরই জন্য তিনটি বিবৃতি পড়ুন এবং এমনি একটি বিবৃতি বের করুন যেটি আপনার বেলায় সবচেয়ে কম প্রযোজ্য । এখন এই বিবৃতির পাশে - ('ক' বা সবচেয়ে কম) চিহ্নিত কলামের নীচের লাইন দুটোর মধ্যবর্তী শুন্য জায়গাটুকু মোটা কালো দাগ দিয়ে পূরণ করে দিন । বাকী দুটো বিবৃতির পাশে কোন দাগ দিবেন না।

এখানে একটি গুচ্ছের নমুনা দেয়া হলো ঃ

	ব (+)	ক (-)
পর্যাপ্ত ক্ষুদা আছে	○	○
প্রায়ই অসুস্থ্য হয়ে পড়েন	○	●
সুসম খাদ্যসূচী মেনে চলেন	○	○
যথেষ্ট ব্যায়াম করেন না	●	○

মনে করুন, আপনি নমুনাটির চারটি বিবৃতি পড়েছেন এবং স্থির করেছেন যে, ''যথেষ্ট ব্যায়াম করেন না'' । এই বৃতিরটি আপনার বেলায় সবচেয়ে বেশী প্রযোজ্য । যদিও অন্য বিবৃতিগুলো কিছুটা আপনার বেলায় প্রযোজ্য হতে পারে । এখন উপরের নমুনায় যেভাবে দেখানো হয়েছে সেভাবে + (সবচেয়ে বেশী) চিহ্নিত কলামের নীচে সেই বিবৃতির পাশের শুন্য জায়গাটুকু পুরণ করে দিন ।

এরপর আপনি অন্য তিনটি বিবৃতি পড়ে স্থির করুন, কোনটি আপনার বেলায় সবচেয়ে কম প্রযোজ্য । মনে করুন অন্য বিবৃতিগুলো অপেক্ষা প্রায়ই অসুস্থ হয়ে পড়েন এই বিবৃতিটি আপনার বেলায় সবচেয়ে কম প্রযোজ্য । এখন উপরের নমুনায় যেভাবে - দেখানো হয়েছে সেভাবে - (সবচেয়ে কম) চিহ্নিত কলামের নীচে সেই বিবৃতির পাশের শুন্য জায়গাটুকু পুরণ করে দিন ।

এভাবে প্রতিটি কলামের বেলায় (+) চিহ্নিত কলামের নীচে মাত্র একটি ও (-) চিহ্নিত কলামের নীচে মাত্র একটি পুরণ থাকবে ।

কোন কোন ক্ষেত্রে কোন বিবৃতিগুলোর পাশে দাগ দিতে হবে সে সম্বন্ধে স্থির করা কিছুটা শক্ত মনে হতে পারে । তখন যতটা সম্ভব জোড়ালো সিদ্ধান্তটাই বেছে নিন ।

এবার পাতা উল্টান এবং শুরু করুন ।

নং		ব (+)	ক (-)	নং		ব (+)	ক (-)
০১	সামজিকভাবে একজন মিশুক ব্যক্তি	O	O	০৫	সাহায্য ছাড়াই গুরুত্তপূর্ণ সিদ্ধান্ত নিতে সক্ষম	O	O
	আত্নবিশ্বাসে অভাব আছে	O	O		নতুন লোকদের সাথে সহজে মিশেন না	O	O
	যে কোন কাজ হাতে নিয়ে পূংখানুপুংখভাবে সম্পন্ন করেন	O	O		ক্ষতি বা উত্তেজিত হবার প্রবণতা রয়েছে	O	O
	কিছুটা আবেগপ্রবণ হবার প্রবণতা রয়েছে ।	O	O		অসুবিধা থাকা সত্তেও কাজ করে যান ।	O	O
০২	অন্য লোকজনের সাথে মেলামেশায় আগ্রহী নন	O	O	০৬	সামাজিকভাবে লোকজনের সাথে মিশেতে খুব বেশী আগ্রহী নন	O	O
	উদ্বেগ বা মানসিক দূশ্চিন্তাযুক্ত	O	O		দায়িত্ব দেয়া হলে তা গুরুত্ব সহকারে নেন না	O	O
	একেবারে অনির্ভরযোগ্য ব্যক্তি	O	O		সবসময় শান্ত ও স্থির থাকেন	O	O
	দলীয় আলোচনায় নেতৃত্ব দেন ।	O	O		দলীয় কাজে নেতৃত্ব দিয়ে থাকেন ।	O	O
০৩	কিছুটা হঠাৎ করে কাজ করেন এবং অস্বস্থিবোধ করেন	O	O	০৭	এমন একজন ব্যক্তি যাকে নির্ভর করা যায়	O	O
	অন্যদের উপর জোরালো প্রভাব রয়েছে	O	O		কোন কিছুতে বিভ্রাট ঘটলে সহজেই বিচলিত হয়ে যান	O	O
	সামাজিক অনুষ্ঠানগুলো পছন্দ করেন না	O	O		নিজস্ব মতামত সম্পর্কে খুব বেশী নিশ্চিত নন	O	O
	একজন অত্যান্ত একনিষ্ঠ ও অবিচল কর্মী ।	O	O		অন্য লোকজন দ্বারা পরিবেষ্টিত থাকতে পছন্দ করেন ।	O	O
০৪	সহজেই নুতন লোকেদের সাথে ভাব জমাতে পারেন	O	O	০৮	সহজেই অন্যান্যদের প্রভাবিত করতে পারেন	O	O
	একই কাজে দীর্ঘসময় লেগে থাকতে পারেন না	O	O		যে কোন ব্যথার সম্মুখীন হলেও কাজটি শেষ করে নিতে পারেন	O	O
	সহজেই অন্যের দ্বারা পরিচালিত হন	O	O		বাছাই করা কয়েকজনের মাঝে সামাজিক সম্পর্কে সীমিত রাখেন	O	O
	এমনকি হতাশাগ্রস্থ অবস্থায় ও আত্ননিয়ন্ত্রনে সক্ষম ।	O	O		ঘাবড়িয়ে যাবার প্রবণতা রয়েছে ।	O	O

নং		ব (+)	ক (-)
০৯	খুব সহজেই কারও সাথে বন্ধুত্ব স্থাপন করেন না	O	O
	দলীয় ব্যপারে সক্রিয় ভূমিকা নিয়ে থাকেন	O	O
	নিয়মিত কাজগুলো শেষ না হওয়া পর্যন্ত চালিয়ে যান	O	O
	আবেগের দিক থেকে কিছুটা ভারসাম্যহীন ।	O	O
১০	অন্যের সাথে সম্পর্কের ব্যাপারে নিশ্চিত	O	O
	অনুভূতিতে সহজেই আঘাত লাগে	O	O
	সুপরিকল্পিত কাজের অভ্যাস সহজেই মেয়ে চলেন	O	O
	মুষ্টিমেয় বন্ধু-বান্ধবদের মাঝে নিজেকে সীমিত রাখেন ।	O	O
১১	অল্পতে রেগে যান	O	O
	যে কোন পরিস্থিতিতে মোকাবেলা করতে সক্ষম	O	O
	অপরিচিত লোকদের সাথে আলাপ আলোচনা করতে অনিচ্ছুক	O	O
	যেকোন কাজ পূংখানুপূংখুরুপে সম্পন্ন করেন ।	O	O
১২	অন্য লোকদের সাথে তর্ক বিতর্ক না করা পছন্দ করেন	O	O
	একটি নির্ধাতির সময়সূচী বজায় রাখতে অক্ষম	O	O
	একজন শান্ত ও অনুত্তেজিত ব্যক্তি	O	O
	খুব বেশী সামাজিক হতে চান ।	O	O

নং		ব (+)	ক (-)
১৩	উদ্বেগ বা দুশ্চিন্তামুক্ত	O	O
	দায়িত্বজ্ঞানের অভাব আছে	O	O
	বিপরীত লিংগের ব্যক্তির সাথে মেলামেলায় আগ্রহী নন	O	O
	অন্য ব্যক্তিদের পরিচালনা করতে দক্ষ ।	O	O
১৪	সহজেই অন্যদের সাথে বন্ধুত্ব স্থাপন করতে পারেন	O	O
	দলীয় কাজে অন্যদের নেতৃত্ব দেয়া পছন্দ করেন	O	O
	দুশ্চিন্তাগ্রস্হ হবার প্রবণতা আছে বলে মনে হয়	O	O
	যে কোন অসুবিধাই থাকুক না কেন, কাজে লেগে থাকেন ।	O	O
১৫	অন্য ব্যক্তির মতামতকে প্রভাবিত করতে সক্ষম	O	O
	দলীয় কাজে যোগদান করার আগ্রহের অভাব রয়েছে	O	O
	বেশী নার্ভার্স ব্যক্তি	O	O
	যে কোন কাজ হাতে নিলে একনিষ্টভাবে করেন ।	O	O
১৬	ব্যবহার শান্ত এবং সহজ	O	O
	হাতে যে কাজ রয়েছে তাতে লেগে থাকতে পারেন না	O	O
	লোকজন পরিবেষ্টিত থাকা পছন্দ করেন	O	O
	নিজস্ব ক্ষমতা সম্পর্কে খুব বেশী বিশ্বাসী নন ।	O	O

নং		ব (+)	ক (-)	নং		ব (+)	ক (-)
১৭	এমন একজন ব্যক্তি যার উপর পুরোপুরি বিশ্বাস করা যায়	O	O	২১	অত্যন্ত উদ্যমশীল ব্যক্তি	O	O
	বহুলোকের সংগের জন্য পরোয়া করেন না	O	O		অন্যদের উপর বিরকত হন না	O	O
	বিশ্রাম করার সময় পাওয়া বরং কঠিন হয়ে পড়ে	O	O		জটিল সমস্যা নিয়ে কাজ করা পছন্দ করেন	O	O
	দলীয় আলোচনায় সক্রিয় অংশগ্রহন করেন ।	O	O		শান্ত অনুষ্ঠানের চেয়ে আনন্দচ্ছল অনুষ্ঠান বেশী পছন্দ করেন ।	O	O
১৮	কোন সমস্যা দেখা দিলে সহজে তাকে ছাড়েন না	O	O	২২	দার্শনীক আলোচনা বেশী উপভোগ করেন	O	O
	ব্যবহার কিছুটা নার্ভার্স হবার প্রবণতা রয়েছে	O	O		কিছুটা সহজেই ক্লান্ত হয়ে পড়েন	O	O
	আত্মবিশ্বাসের অভাব রয়েছে	O	O		কাজ করার আগে খুব সতর্ক হয়ে ব্যাপারগুলো বিবেচনা করেন	O	O
	অন্যান্যদের সাথে সময় কাটিয়ে দেয়া পছন্দ করেন ।	O	O		লোকের উপর খুব বেশী আস্থা নেই ।	O	O
১৯	একজন খুব মৌলিক চিন্তাবিদ	O	O	২৩	প্রধানতঃ ধারণা নিয়ে কাজ করতে পছন্দ করেন	O	O
	কিছুটা ধীর ও আয়েশী ব্যক্তি	O	O		কিছুটা ধীর গতীতে কাজ করেন	O	O
	অন্যের সমালোচনা করার প্রবণতা রয়েছে	O	O		সিদ্ধান্ত নেবার সময় খুব সতর্ক	O	O
	অনেক চিন্তাভাবনা করার পর সিদ্ধান্তে পৌছেন ।	O	O		বেশ কিছু সংখ্যক লোকের সাথে চলতে অসুবিধা বোধ করেন ।	O	O
২০	বিশ্বাস করেন যে, প্রত্যেকেই মূলতঃ সৎ	O	O	২৪	সুযোগ নেবার বেলায় একজন দক্ষ লোক	O	O
	কাজে কি খেলাধূলায় সবখানেই স্বাচ্ছন্দ্যবোধ করেন	O	O		সহজেই অন্য লোকের উপর বিরক্ত হয়ে যান	O	O
	যথেচ্ছ অনুসন্ধিৎসু মনোভাব আছে	O	O		অল্প সময়ের মধ্যে অনেক কাজ করতে পারেন	O	O
	ঝোকের মাথায় কাজ করার প্রবণতা রয়েছে ।	O	O		নুতুন ধারণা নিয়ে চিন্তা করে প্রচুর সময় ব্যয় করেন ।	O	O

নং		ব (+)	ক (-)	নং		ব (+)	ক (-)
২৫	একজন অত্যন্ত ধৈর্য্যশীল ব্যক্তি	O	O	২৯	অত্যন্ত সতর্ক ব্যক্তি	O	O
	শিহরণ ও উত্তেজনা খোজেন	O	O		কিছুটা বরং ধীরে কাজ করতে পছন্দ করেন	O	O
	একটানা অনেকক্ষণ কাজ চালিয়ে যেতে সক্ষম	O	O		অত্যন্ত কৌশলী এবং কূটনীতিবিদ	O	O
	পরিকল্পনা করার চেয়ে বরং কোন কাজের বাস্তবায়ন করেন ।	O	O		গভীর চিন্তায় মনকে আচ্ছন্ন রাখেন না ।	O	O
২৬	দিনের শেষে খুব ক্লান্ত বোধ করেন	O	O	৩০	সহজেই লোকের সাথে ধৈর্য্য হারিয়ে ফেলেন	O	O
	তাড়াহুড়া করে বা আকস্মিকভাবে সিদ্ধান্ত নেওয়ার প্রবণতা রয়েছে	O	O		বেশীর ভাগ লোকের চেয়ে সহ্য শক্তি কিছুটা কম	O	O
	অন্য লোকের প্রতি অসন্তুষ্টি হন না	O	O		সৃজনশীল এবং মৌলিক হবার প্রবণতা রয়েছে	O	O
	যথেষ্ট জ্ঞান পিপাসা আছে ।	O	O		উত্তেজনার জন্য খুব বেশী পরোয়া করেন না ।	O	O
২৭	মুহূর্ত্যের উত্তেজনায় কাজ করেন না	O	O	৩১	অনুমানের উপর ভিত্তি করে কাজ করার প্রবণতা আছে	O	O
	অন্যের ত্রুটি দেখলে বিরক্ত হয়ে যান	O	O		যথেষ্ট উৎসাহ ও উদ্দিপনা রয়েছে	O	O
	জটিল চিন্তা নিয়ে মগ্ন থাকায় আগ্রহের অভাব	O	O		লোককে বিশ্বাস করেন না যতক্ষন না তারা নিজেদের প্রমাণ করে	O	O
	তাড়াতাড়ি কাজ করতে বেশী পছন্দ করেন ।	O	O		যথেষ্ট চিন্তা করতে হয় এমন প্রশ্ন উপভোগ করেন ।	O	O
২৮	লোকের উপর অত্যাধিক বিরক্ত হবার প্রবণতা রয়েছে	O	O	৩২	খুব তাড়াতাড়ি কাজ করা পছন্দ করেন না	O	O
	সবসময় কাজ নিয়ে থাকতে পছন্দ করেন	O	O		লোকের উপর যথেষ্ট বিশ্বাস আছে	O	O
	সাধারনতঃ কোন সুযোগ বা ঝুঁকি নেন না	O	O		মুহূর্ত্যের ইচ্ছায় নিজেকে স্বপে দেবার প্রবণতা রয়েছে	O	O
	কোন মৌলিক চিন্তার প্রয়োজন নেই না থাকলেও খুব অল্প এমন কাজ করতে বেশী পছন্দ করেন ।	O	O		জটিল সমস্যা নিয়ে কাজ করা উপভোগ করেন ।	O	O

Appendix C-6
BOOKLET OF GPI AND GPP

নং		ব (+)	ক (-)
৩৩	একজন অত্যন্ত উদ্যমী কর্মী	O	O
	খুবই উদারভাবে সমালোচনাকে গ্রহন করেন	O	O
	যথেষ্ট যুক্তির দরকার এমন ধরনের সমস্যাকে অপছন্দ করেন	O	O
	আগে কাজ পরে চিন্তা করার প্রবণতা রয়েছে ।	O	O
৩৪	অন্যলোকের শুধুমাত্র ভাল দিক ছাড়া অন্য কিছু আলোচনা করেন না	O	O
	শুরুর আগে যথেষ্ট সতর্ক হন	O	O
	চিন্তার উদ্রেক হয় এমন আলোচনায় আগ্রহী নন	O	O
	একস্থান হতে অন্যস্থানে যেতে তাড়াহুড়া করেন না ।	O	O
৩৫	অনুসন্ধিৎসূ মন নেই	O	O
	ঝোঁকের মাথায় কোন কাজ করেন না	O	O
	সাধারণতঃ উৎসাহে ফেটে পড়েন	O	O
	অন্যলোকের দূর্বলতায় বিরক্ত বোধ করেন ।	O	O

নং		ব (+)	ক (-)
৩৬	অন্যলোকের চেয়ে বেশী কাজ করতে সক্ষম	O	O
	শুধুমাত্র উত্তেজনার জন্য ঝুঁকি নেয়া উপভোগ করেন	O	O
	সমালোচনার পাত্র হলে আহত হন	O	O
	বাস্তব জিনিস অপেক্ষা ধারণার সাহায্যেই কাজ করেন ।	O	O
৩৭	অন্য লোকের কাছে অত্যান্ত বিশ্বাসী	O	O
	নিয়ম মাফিক সহজ কাজ পছন্দ করেন	O	O
	মুহুর্ত্যের উত্তেজনায় কাজ করেন	O	O
	প্রাণ চাঞ্চল্য ও জীবনী শক্তিরে ভরা ।	O	O
৩৮	খুব বেশী তাড়াতাড়ি সিদ্ধান্ত নেন	O	O
	প্রত্যেকের জন্য যথেষ্ট ভালবাসা আছে	O	O
	কাজে অথবা খেলাধুলায় প্রাণ চাঞ্চল্য বজায় রাখেন	O	O
	জ্ঞান অর্জনে যথেষ্ট আগ্রহ নেই ।	O	O