

A COMPARATIVE STUDY OF EMOTIONAL INTELLIGENCE AND INTELLIGENCE QUOTIENT BETWEEN INTROVERT AND EXTROVERT PERSONALITY

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ABSTRACT

The researchers are specially oriented towards impact of personality on emotional quotient (E.Q.) and intelligence quotient (I.Q.). These researchers studied the impact of personality on E.Q. as well as I.Q. is required to explain success. Along with the effects of emotional intelligence on the individual characteristics and environment of an individual also have determinative role on emotional intelligence. When we bear in mind that development of emotional intelligence is a lifetime process, determining the effect of education on development of emotional intelligence become important. In the context, it is crucial to determine whether or not there is a difference between emotional intelligence of students studying at different majors.

The study was conducted to explore the comparison of emotional quotient and intelligence quotient among personality (introvert and extrovert) and gender (boys and girls). The study was conducted in N.M.V. Lalitpur (U.P.). The data were collected from 100 students. The data was divided into two groups on the basis of introvert and extrovert personality. Each of the two groups consisted of an equal number of boys and girls respondents. A standardized Introversion Extroversion Inventory (IEI) by P. F. Aziz and Rekha Gupta (2001) Emotional Intelligence Inventory (EII) by S.K. Mangal and Shubhra Mangal (2005), and Test of General Intelligence (TGI) by K. S. Misra and S. K. Pal (2005) were used to collect data. Data were analyzed by using analysis of variance (ANOVA). The main conclusion is that, extrovert students have more EQ than introvert students. And extrovert students have more IQ than introvert students.

KEYWORDS: Emotional Quotient, Intelligence Quotient, Personality and Gender

INTRODUCTION

There are numerous ways to defining **E.I.** But for now, let's say that it is the ability to be aware of your emotions and the emotions of others and then to use that knowledge to help manage the expression of emotions so that they foster success instead of cause roadblocks. In 1998 Goleman published a book called "**Working with Emotional Intelligence**" in that book he widened the definition of emotional intelligence to consist of 25 skills abilities and competence. Thereafter, articles on emotional intelligence began to appear with increasing frequency across a wide range of academic and popular outlets as well as many definitions and claims began to dominate academy. Emotional intelligence (E.I.) is the area of cognitive ability involving traits and social skill that facilitate interpersonal behavior. Emotional intelligence refers to the ability to perceive control and evaluate emotions some researchers suggest that emotional intelligence can be learned and strengthened, while other claim it is an inborn characteristic. It addresses the emotional, personal, social and survived

dimensions of intelligence. It concerned with understanding oneself and other, relating to people and coping with the immediate surroundings.

Pete Salvoes and John D. Mayer (1990), “The subset of social intelligence that involves the ability to monitor one’s own and others’ feelings and emotions, to discrimination among them and to use this information to guide one’s thinking and actions.”

Mayer & Shalvey, (1997), “The ability to perceive emotion; integrate emotion to facilitate thought, understand emotions and to regulate emotions to promote personal growth.”

Schmidt, (1997), “The ability to recognize and respond to the emotions and feelings of other, as well as the skill to help others manage their emotions.”

Cartwright and Amanda Solloway (2007), “Emotional Intelligence is the ability to understand, accept and recognize our own emotions and feelings including their impact on our self and other people and to use this knowledge to manage and improve our relationship with other.”

Thus emotional intelligence is the ability to perceive emotions, feelings, thoughts including their impact on own self and other people and to use it to improve our relationship with other and environment. Emotional intelligence can be applied through a set of learnable skills that include identifying and changing emotions, motivating you, and empathizing with another person. Almost anyone can learn the EQ skills to build more successful relationships. For student, EQ helps increase academic success, stronger friendships, and reduce risk behaviors, career growth, relationships.

The term “**I.Q.**” comes from the German ‘**Intelligence Quotient**’. Intelligence Quotient (I.Q.) is a value that indicates a student’s ability to learn understands and apply information and skill in a meaningful way. The first intelligence test was developed by Binet and Simon in 1905. In this test intelligence has used in the form of mental age. His principle goal was to identify students who needed special help in coping with the school curriculum. Along with his collaborator Theodore Simon, Binet published revision of his intelligence scale in 1908 and 1911, the last appearing before death. After this Terman improve this test in 1916. IQ is primarily used to measure one’s cognitive ability, such as the ability to learn or understand new situation; how to reason through a given problem; the ability to apply knowledge to one’s current situations. It involves primarily the neo Cortes or top porting of the brain.

Gotlfredson, (1997), “Intelligence is a very general mental capability that, among other things, involves that ability to reason, plan, solve problems, thinking abstractly, comprehend complex ideas learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather it reflects a broader and deeper capability for comprehending our surrounding “catching on”, “making sense” of things or “figuring out” what to do”.

The term ‘**Personality**’ was coined nearly 2000 years ago, from the word ‘**Persona**’. Person literally means the ‘**Outer covering**’ or ‘**The mask**’, which referred to the costume, worn by stage actors in that era. Several psychologists have tried to define the term ‘**personality**’ but the most approximate definition yet, of the term, has been given by G.W.Allport.

G.W.Allport (1937), “Personality is the dynamic organization within the individual of those psycho-physical systems that determine his characteristic behavior and thought.”

McAdams and Pals (2006), “Personality is an individual’s unique variation on the general evolutionary design for human nature, expressed as a developing pattern of dispositional traits, characteristic adaptations, and integrative life stories, complexly and differentially situated in culture.”

The trait of extraversion-introversion is a central dimension of human personality theories. The terms introversion and extroversion were first popular by Carl Jung. Extraversion is **“the act state or habit of being predominantly concerned with and obtaining gratification from what is outside the self.”** Extraversion tend to enjoy human interactions and to be enthusiastic, talkative, assertive and gregarious. Extraverts are energized and trivet off of being around other people. They take pleasure in activities that involve large social gathering such as parties, community activities, public demonstrations and business or political group. An extraverted student is likely to enjoy time spent with other student and find less reward in time spent alone. They tend to be energizing when around other student and they are more prone to bourdon when they are by themselves. Introversion is **“the state of or tendency towards being wholly or predominantly concerned with and interested in one’s own mental life.”** Some popular writers have characterized introverts as people who energy tends to expand through reflection and dwindle during interaction. This is similar to Jung’s new, although he focused on mental energy rather that physical energy. Few modern conceptions make this distinction.

Extraversion and introversion are typically viewed as single continuum. Thus, to be high on one it is necessary to be low on the other. Jung defined introversion as an **“attitude type characterized by orientation in life through subjective psychic contents”** (focus on one’s inner psychic activity); and extraversion as **“an attitude type characterized by concentration of interest on the external objects”** (the outside world)

Shuted et al. (1998) for example, found significant sex difference in total measured trait E.I. with females scoring higher than males on average in another study; Petrides and Furnham (2000) used a self report measure of trait E.I. and had participants estimate their score on E.I. to study sex difference. According to Kafestsies (2004) females are superior on the banch of perception of emotional and experiential. For example, female are more accurate on decoding facial expression than males. Yet’s as overall E.Q. scores, there is no significant difference between gender. Another study by Arteche, Chamorro-Premuzic Furnham and Crump (2008), also started there were no significant associations between overall E.Q. and gender, but there are significant correlation only when facts of E.Q. are considered. Example, female scored higher on interpersonal facet. According to Craiy, Tran Hermans, Willians, Kemp, Morries and Gordan (2009) found out males were found to have lower score on overall E.Q. than females with females out scoring higher slightly in one of the facets of E.Q. (empathy). Females are better in emotional skill and emotional related perceptions. Thingujam and Ram (2000) in their attment of Indian adaptation of emotional intelligence scale (Schutte et al. 1998) had developed Indian norms (N=811) for males and females separately and found that women were significantly scoring higher than men. Similarly Mohanty and Devi L. (2010) have revealed in their study on gender difference among E.I. (N=60) that girls are more optimistic and well aware of their feelings in comparison to boys. Girls are more aware and understanding their own feelings (components of E.I.) than boys.

Jensen (1998) addressed the question of female-male difference in intelligence by analyzing tests that “load heavily on g” but were not nor med to eliminate sex differences. He concluded, “No evidence was found for sex difference in the mean level of g or in the variability g ... males on average, excel on some factors; females on others” (Jensen, 1998). Jensen’s conclusion that no overall sex differences exist for intelligence has been bolstered by researchers who assessed

intelligence with a battery of 42 mental ability tests (Johnson & Bouchard, 2007). They found that most of the tests showed little or sex difference. There were however, several tests that showed a difference between males and females of 0.5 SD or more. There difference included an advantage for female for verbal abilities such as fluency and memory abilities and an advantage for male visuospatial abilities such as object rotation. These researchers recommended that the usual partition intelligence into fluid partitions intelligence into verbal perceptual and visuospatial rotation. When this model is used, female excel at verbal and perceptual task, males excel at visuospatial task.

Personality has been found to be correlated with intelligence (Zeidner & Matthews, 2000). Findings on this relationship have been controversial, in that extraversion has been found to be both positively (Ackerman & Heggestad, 1997; Austin et al, 2002; Lynn, Hampson & Magee, 1984) and negatively (Farham et al, 1998; Moutafi et al, 2003) linked to measures of intelligence. It has been proposed that the relationship between extraversion and intelligence is mediated by the nature of the intelligence test, due to introverts having a higher resting level of cortical arousal than extraverts (Eysenck, 1967, Eysenck, 1994). This suggestion is in line with Robinson (1985), who claimed that extraversion is associated with intellectual style and intelligence profiles and not with actual ability. More specifically, extraversion has been found to perform better on timed tasks (Rawlings & Carnie, 1989) whereas introverts tend to perform better in task requiring insight and reflection (Matthews, 1992; Saklofske & Zeidner, 1995). Although a positive relationship exists between IQ and extraversion, extroversion has been found in several studies (Busato, Prins, Elshout & Hamaker, 2000; Furnham & Chamorro-Premuzic, 2004; Furnham, Chamorro-Premuzic & Mc Dougall, 2002) to be negatively associated with academic success. Early studies, in particular, indicated that introverts performed were better than extroverts, suggesting that the former were better at revision and possessed a higher ability to learn (Entwistle & Entwistle 1970). More recently, Sanchez-Marin et al, (2001) found that extroverts failed their programs more frequently than introvert, again suggesting that this was to be with their distractibility, et al, (1998) found that extraverts performed significantly better than introverts on a measure of logical reasoning.

According to a study done by Coetzee et al, (2006) on 107 South African leaders in manufacturing found results that indicate that other perceived introverted type on more emotionally competent than the extraverted type. It is argued that they could be due to the introspective and quiet nature of these personality preferences, which may have led them to being perceived as more emotionally competent and in control of their emotional extraverted personality types on the other hand, appeared to have higher confidence in their level of emotional competence. These personality types are action oriented confident and sociable and may verbalize their emotional nature (Mayers et al. 1998). In Higgs' 2001 study expected relationships were encountered. Results between the thinking / feeling scale and emotional resilience were supported as was the relationship between the conscientiousness and intuition were positively correlated with the overall EQ score with the largest number of elements of EQ (motivation, influence and intuitive decision making) and intuition as a dominant function, seeming to be the most closely linked to EQ (Dulewicz & Higgs, 1999). Lopes et al, (2003) found there to be a general pattern of low correlation between scores on an EQ test, on the one hand and personality traits and verbal intelligence on the other (Loopes et al, 2003). On the other hand Bastian et al, (2005) found high correlations between personality and self report EQ measures. Their study showed that self report EQ measures were moderately correlated with personality, but their correlation with cognitive abilities were generally near zero. In contrast, performance measures of EQ have low correlation with personality measures. The general trend of these results were that higher EQ is associated with higher extraversion, openness, agreeableness and conscientiousness, but with lower neuroticism (Bastian et

al, 2005). These results support previous research findings that self-report EQ measures are more closely related to personality than are performance EQ measures (Bastian et al, 2005). Lopes, Salovey and Straus (2003) indicate personality dispositions may be a reflection of a person's ability to regulate emotions. This connection between emotional intelligence and personality is minimized when emotional intelligence is assessed through an ability test and personality is a survey of self-reflection. However, some critics question the validity of emotional intelligence measures particularly the Bar-On-EQ-i claiming they have common characteristics with personality factors (Davies Stankov, & Roberts, 1998; Dawda & Lucas, 2000) Mc Rae (2000) argues personality psychologists would expect a strong relation between the emotional intelligence and the five factor model. There are empirical data that give evidence of this substantial overlap in the mixed models of Goleman and Bar-On (Bar-On 1997; Schutte, Malouff, Hall Higgerty, Copper, Golden & Dornheim. 1998). Some researchers believe that the factor of openness lends itself to intelligence development. One might hypothesize that people scoring high in openness may have a greater ability to develop and improve their emotional intelligence (Mc Crae, 2000), using the Disc personality profile, when does not assess openness, may help further decrease any possible correlation between emotional intelligence and personality by eliminating any advantage a personality by eliminating any advantage a high openness dimensional score may have on one's emotional intelligence score.

OBJECTIVE OF THE STUDY

To find out intelligence quotient between boys and girls

To find out emotional quotient between boys and girls

To find out intelligence quotient between introvert and extrovert personality

To find out emotional quotient between introvert and extrovert personality

HYPOTHESIS

H.1- There will be significant differences in between boys and girls's Intelligence Quotient.

H.2- There will be significant differences in between boys and girls's Emotional Quotient.

H.3- There will be significant differences in between Introvert and Extrovert's Intelligence Quotient.

H.4- There will be significant differences in between Introvert and Extrovert's Emotional Intelligence.

METHODS

The survey research method as used in this study. Survey research studies on emotional intelligence and intelligence quotient by studying sample chosen from introvert extrovert and gender variables.

"Methodology is the science of methods or principles of procedure" (Good, 1945).

Type of Research and Design

It is an exploratory study using two way ANOVA design. There are two IV's and two DV's.

SAMPLE

The sample consisted of 100 undergraduate college students of N.M.V. Lalitpur city (U.P.) The sample was divided into two groups on the basis of introvert and extrovert personality. Each of the two group consisted of an equal

number of boys and girls respondents. Each of these four group consisted of 25 respondents.

Criteria of Sample Selection

Only those young respondents were included in the samples who were studying in under graduation of 16-23 years unmarried and without any major diagnosed chronic physical or mental illness.

Instructions

To make the subject acquainted with testing paper of emotional intelligence and intelligence quotient and asking for right response that they feel in their daily life style.

In **Emotional Intelligence Inventory (EII)** test paper, as you can see it is a test booklet and an answered sheet. This question is related our daily life, which you experience in your daily life. In test paper, the question are related Emotional Intelligence. It has two answer were **Yes** or **No**, you give right answer which is suitable with you. There is not any one answer were right or wrong.

In **Test of General Intelligence (TGI)** test paper, as you see it includes six distinct abilities, each distinct abilities has 10 questions. You give limited time of 24 minute for 60 questions. It has logical question.

Procedure

For recording subject's responses on **IEI Test paper** (Introvert Extrovert Inventory test). They were given EQ **EII Test (Emotional Intelligence Inventory)** it has four categories and it has 100 questions 25 in each categories and the second test IQ **TGI (Test of General Intelligence)** it has six categories and 60 question, 10 in each categories.

Data Collection

For collecting the data testing were conducted. A verbal consent was taken from the subjects after informing them the purpose of the study. They were assured that the information they provide will be kept confidential and used only for research purpose. Thus the sample of male and female respondents aged between 16-23 was selected. They were then handed over a copy of the questionnaire to respond. They were helped if they had any difficulty regarding understanding or responding to the questionnaire items. Respondents were requested to respond honestly and to answer all the items. After they had completed the questionnaire they were thanked and the complete questionnaires were collected.

TOOLS

In the present study following tools are used: Introversion Extroversion Inventory (IEI) by P. F. Aziz and Rekha Gupta (2001), Emotional Intelligence Inventory (EII) by S. K. Mangal and Shubhra Mangal (2005), and Test of General Intelligence (TGI) by K. S. Misra and S. K. Pal (2005).

RESULTS AND DISCUSSIONS

As a result of emotional intelligence and intelligence quotient between gender (boys and girls) and personality (introvert and extrovert) is research topic. Here we found the impact of personality on EQ and IQ with gender. The mean and standard deviation for emotional quotient, and intelligence quotient scores of gender (boys and girls) and personality (introvert and extrovert) were calculated. ANOVA was applied to determine the significance of the difference between means of emotional quotient and intelligence quotient scores between gender and personality. The results thus obtained are

presented in the following tables.

Table 1: Mean and S.D. Table of Gender

Gender		E.Q.	I.Q.
Boys	Mean	66.5200	94.2400
	S.D.	12.140020	13.91308
	N	50	50
Girls	Mean	64.4600	90.0400
	S.D.	12.97912	17.14519
	N	50	50
Total	Mean S.D. N	65.4900 12.67105 100	92.1400 15.67667 100

Table 1 shows the means and SD of gender on both types. The table shows the mean value of EQ and IQ with reference to gender. The mean table shows that in EQ of boys is higher in comparison to girls (boys M=66.52 and girls M=64.46). In IQ of boys is higher in comparison to girls (boys M=94.24 and girls M=90.04). The mean of boys' EQ is greater than girls' EQ and the mean of boys' IQ is greater than girls' IQ.

Table 2: ANOVA Table of Gender

		Sum of square	df	Mean square	F.	Sign.
EQ Gender	Between Group	106.098	1			
	Within Group	15788.900	98	106.090	.658	.419
	Total	15894.990	99	161.111		
IQ Gender	Between Group	441.000	1			
	Within Group	23889.040	98	441.000	1.809	.182
	Total	24330.040	99	243.766		

ANOVA table describe value of Gender x EQ ($F=.658$ and $p<.05$) and Gender x IQ ($F=1.809$ and $p<.05$) the interaction effect between gender and EQ is not found significant. The interaction effect between gender and IQ is not found significant. This suggests that boys and girls have equal level of EQ and IQ.

Table 3: Mean and SD Table of Personality

Personality		E.Q.	I.Q.
Introvert	Mean	59.1600	87.0600
	S.D.	8.42581	14.92349
	N	50	50
Extrovert	Mean	71.8200	97.2200
	S.D.	13.10038	14.87127
	N	50	50
Total	Mean S.D. N	65.4900 12.67105 100	92.1400 15.67667 100

Table 3 shows mean and S.D. of personality on both types, table has. The table shows the mean value of EQ and IQ with reference of personality. The mean table shows that in EQ of extrovert is higher in comparison to extrovert (extrovert $M=71.82$ and introvert $M=59.16$). In IQ of extrovert is higher in comparison to introvert (extrovert $M=97.2$ and introvert $M=87.06$). The mean of extrovert's EQ is greater than introvert's EQ and the mean of extrovert's IQ is greater than introvert's IQ.

Table 4: ANOVA Table of Personality

		Sum of square	df	Mean square	F.	Sign.
EQ Personality	Between Group	4006.890	1	4006.890	33.031	.000
	Within Group	11888.100	98	121.307		
	Total	15894.990	99			
IQ Personality	Between Group	2580.640	1	2580.640	11.628	.001
	Within Group	21749.400	98	221.933		
	Total	24330.040	99			

Table 4 shows the main and interaction effect of personality the first interaction Personality x EQ and Personality x IQ are significant. ANOVA table describes value of Personality x EQ ($F=33.03$ and $p<.05$) and Personality x IQ ($F=11.62$ and $p<.05$). This suggests that extrovert students have high EQ and IQ level than introvert student.

In the present study effect of personality and gender were found on EQ and IQ. There are no significant difference is found in EQ and IQ on the basis of gender.

H.1- There Will Be Significant Differences in Between Boys and Girls Intelligence Quotient

The findings related gender is opposite of our hypothesis, mean score of boys is higher than girls' Intelligence Quotient (Mean =94.24 and 90.04, $F=1.809<.05$). But there are no significant difference found in boys' and girls' Intelligence Quotient. Thus, we can say that on the basis of gender, boys and girls have equal Intelligence Quotient level. Jensen (1998) addressed the question of female-male difference in intelligence by analyzing tests that "load heavily on g" but were not normed to eliminate sex differences. He concluded, "No evidence was found for sex difference in the mean level of g or in the variability g ... males on average, excel on some factors; females on others" (Jensen, 1998).

H.2- There Will Be Significant Differences in Between Boys and Girls Emotional Quotient

The findings related gender is opposite of our hypothesis, mean score of boys is higher than girls' Emotional Quotient (Mean =66.5200 and 64.5200, $F=.658<.05$). But there are no significant difference found in boys' and girls' Emotional Quotient. Thus, we can say that on the basis of gender, boys and girls have equal Intelligence Quotient level. The relationship between emotional intelligence and sex difference among 134 adolescents involved in a six week training camp run by the military was investigated by Charbonneau and Nical (2002). Results revealed that girls scored somewhat but not significantly higher than the boys on emotional intelligence. Artech, Chamorro-Premuzic Furnham and Crump (2008), also started there were no significant associations between overall E.Q. and gender, but there are significant correlation only when facts of E.Q. are considered. Example, female scored higher on interpersonal facet.

H.3- There Will Be Significant Differences in Between Introvert and Extrovert's Intelligence Quotient

There are more significant difference in between Introvert and Extrovert's Intelligence Quotient (Mean = 87.0600

and 97.2200, $F=11.628<.05$). Thus extrovert students have more Intelligence Quotient than introvert students. There found significant difference in extrovert and introvert students' Intelligence Quotient. The study aim to study the intelligence of extrovert and introvert secondary students of District Rewari (2013). A sample of 200 secondary Boys and girls students with the age range 15 to 18 years. The Introversion- Extroversion Inventory (IEI) (By P F Aziz & Rekha Agnihotri) and Samuhik Manasik Yogyata Pariksha by Dr. S. S. jalota were used/ Mean, SD, T-test were used as statistical Techniques. The finding of the present research revealed that extrovert adolescent students are more intelligence as compared to introvert adolescent students.

H.4- There Will Be Significant Differences in Between Introvert and Extrovert's Emotional Intelligence

There are more significant difference in between Introvert and Extrovert's Emotional Quotient (Mean = 71.8200 and 59.1600, $F=33.031<.05$). Thus extrovert students have more Emotional Quotient than introvert students. There found significant difference in extrovert and introvert students' Emotional Quotient. The genereal trends of these results were that higher EQ is associated with higher extraversion and lower introversion, Bastian et al, 2005. Work by Zadal (2004) has assessed the link between emotional intelligence by using Emotional Competence Inventory (Goleman's inventory) and personality trait. This study found that there is a significant relationship between emotional intelligence and personality trait of extraversion. The research conducted by Beshart (2010) as 'studying the relationship between the aspect of personality and emotional intelligence'. The research results showed that there is a significant positive correlation between emotional intelligence and extraversion.

CONCLUSIONS

Thus, on the basis of data analysis we find that there is no significant difference between EQ and IQ on the basis of gender, so we can say that according to gender boys and girls have equal level of EQ and IQ. And on the other hand we find significant difference between EQ and IQ on the basis of personality. So we can say that extrovert students have more EQ than introvert students. And extrovert students have more IQ than introvert students. A positive relationship exists between IQ and extraversion, extroversion has been found in several studies (Busato, Prins, Elshout & Hamaker, 2000; Furnham & Chamorro-Premuzic, 2004; Furnham, Chamorro- Premuzic & Mc Dougall, 2002) So we can say that extrovert student have more mature and superior than introvert. And extrovert students are both heart smart and book smart.

Extrovert students are social, talkative and optimistic. They are free to express their emotions and feel easy to discuss with everyone. They are not bounded by rules. They easily describe their feelings with other. They discuss their problem and thoughts with everyone, so they have high emotional quotient. By discuss they also develop their intelligence quotient. So it can say that extrovert student have high EQ and IQ.

Thus, on the basis of Lalitpur city, boys and girls have equal EQ and IQ level. But extrovert students of Lalitpur city are more mature and intelligent than introvert student. So we can say that introvert students need of development in both areas EQ and IQ. By training introvert student can develop EQ level.

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