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Correspondence Addresses of Authors

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Iram Mansoor
PhD, Fellow
Department of Psychology
University of Karachi

Ghulam Mehdi Hayat Khan
Lecturer
Department of Psychology
Govt. Post Graduate College Jhang

Dr. Muhammad Azam Tahir
Associate Professor
Department of Psychology
University of Balochistan, Quetta

Sadia Shaukat
Lecturer
University of Education, Lahore

Hina Imran
Lecturer
Institute of Clinical Psychology
University of Karachi-Pakistan

Muhammad Khalid Ramay
Assistant Professor
Department of Psychology
Govt. Post Graduate College Jhang

Muhammad Naveed Riaz
National Institute of Psychology
Quaid-i-Azam University
Islamabad

Dr. Kausar Ansari
Associate Professor
Institute of Clinical Psychology
University of Karachi

Dr. Sarwat Jahan Khanam
Assistant Professor
Institute of Clinical Psychology
University of Karachi-Pakistan

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RELIABILITY ASSESSMENT OF THE SHORT FORM OF REVISED CHILDREN'S MANIFEST ANXIETY SCALE (RCMAS-2) IN PAKISTAN

Iram Manseer
Department of Psychology
University of Karachi
and
Riaz Ahmad
Institute of Clinical Psychology
University of Karachi

ABSTRACT

The focus of the present research is reliability analysis of Short Form of Total Anxiety of Revised Children's Manifest Anxiety Scale (RCMAS-2; Reynolds & Richmond, 2008). The present research carried out in two phases. In phase I, RCMAS-2 was translated in to Urdu language and adapted according to the Pakistani culture. After the stages of forward and backward translation, the cross language validation was assessed by using "single group bilingual design" consisting of 50 school going bilingual adolescents (25 males & 25 females) selected randomly from the different educational institutes of the Karachi, Pakistan. The estimates of cross language validation shows significant results (r=.618) at .01 significance level. In second phase, the reliability of Urdu version of Short Form of RCMAS-2 was established by the application of Urdu version on the sample of 100 children (52males & 46 females) of 6 to 19 years of age from different schools and colleges of Karachi city. Cronbach's alpha was found to be .518. The scale demonstrated its strength by providing significant test retest reliability (r=.855) at .01 alpha level. Furthermore the correlations between both versions were also assessed. This research initiated further research work on RCMAS-2.

INTRODUCTION

Anxiety is a universal experience. It has been described as a form of awareness which occurs after encountering danger. Anxiety is a generalized state of excessive apprehension that seriously interferes with a person's ability to function (Comer, 2001; Navid et al., 1997; Pastorino & Portillo, 2006). Mostly definitions of anxiety fall in two basic categories; one is habitual innate or trait anxiety and second is situation produced anxiety (Lokare, 1984).

Children's fear and anxiety can be defined as strong emotional reactions that serve to protect the individual from potential threat and harm; they tend to decrease within a short period of time. New fears increase as child grows and become mobile. Children's anxieties have discrepancy depending on the child's age, gender, socio-economic class and other individual and social variables which play vital role in child's life (Fonseca, Yule & Erol, 1994). Wide differences be present in the way children convey fears so the behavioral responses are a comparatively poor index of fear, making pragmatic investigation of children's fears a difficult undertaking (Campbell, 1986). Despite these problems, studies have been conducted using behavioral observations to fear-provoking stimuli (Scarr & Salapatek, 1970), parents reports about their children's fears (Jersild & Holmes, 1935) and the reports of the children themselves (Bauer, 1976). Many studies explored specific age-related fears, such as fear of stranger and test anxiety (Campbell, 1986).

The developmental period of childhood and adolescence, not only effects the manifestation of disorders in children but also the types of treatment for these disorders which are more beneficial according to their developmental stage (Carson et al., 1998; Mash & Barkley, 2003).

There is consistently a call for more research on the topic of childhood anxiety. Much of the empirical evidence upon which children are diagnosed and treated is stems from the research work related to adults (Hudson, Kendall, Coles, Robin & Webb, 2002). This emphasis is problematic in this aspect that the experience of the anxiety symptoms in children is same, as in adults, but how the children display these symptoms and react to them creates a lot of difference from adults. This difference can lead to difficulties in assessment, and it may be difficult to determine if a child's behavior is only part of developmental stage or whether it constitutes a separate disorder.

Most of the current literature on childhood anxiety is focused on treatment of anxiety disorder but there is still a need to study the development of anxiety and its correlates. The more information available on the nature of childhood anxiety, that how it effects the child's life and the interactions that can occur between anxiety and a multitude of developmental factors, the greater the likelihood that general understanding will improve and more suitable opportunities for treating the anxiety will emerge – understanding of the relationship of anxiety to different factors can help us to prevent anxiety.

Normative data for anxiety in children and adolescents is derived from the studies in English-speaking countries. There is lack of research work in cross-cultural differences in the anxiety of children and adolescents. Some studies focused to compare the patterns of incidence and development of anxiety in different populations and cultures. These studies contribute in understanding nature, development and treatment of anxiety disorders but still there are questions about prevalence across different cultures and effectiveness of intervention in different populations. There is a need to take account of cross-cultural factors in understanding normal and abnormal fears in children. Cross cultural studies exposes other variables that influence on children's anxiety such as religion, magical beliefs, witchcraft, life in rural areas of under developed countries and most important difference is in the brought up of people in different cultures in different circumstances (Fonseca, Yule & Erol, 1994). These cultural differences emerge the need of the test development, test use, and other psychometric properties which have crucial role in cross-cultural psychology.

With the increased globalization of psychology and related fields, having reliable and valid measures that can be used in a number of languages and cultures is critical. Some standards have been established in psychology for the translation and adaptation of instruments. The purpose of this current research is to translate and adapt the Short- Form of Total Anxiety (SF-TOT) of Revised Children's Manifest Anxiety Scale (RCMAS-2). This scale was selected for its effectiveness and world wide use. The Short Form is appropriate when respondents are available to complete the form for only short time or when only a brief measure of Total Anxiety is needed for research purposes or screening large numbers of children (Reynolds & Richmond, 2008).

METHOD

In recent years interest in the problems of translation and cross-cultural adaptation of health and service outcome measure has full-fledged considerably. Often mental health measurements and psychological tests have been developed for content, validity and reliability in one country or language entirely. Some of these instruments are then used in different languages and cultural settings, but often without detailed attention to the cross-national and cross-cultural adaptation that is essential (Hussein, 2007). Actually attempts to develop tests in each country often are disenchanted by various conditions. These include the lack of specialists in test development, political and social orientations. Literature points out that before any research instruments can be used with population other than the original to which they are devised, it should provide evidences of its applicability and cultural suitability.

In the developing country like Pakistan the limited work in this field confine researchers to develop new instrument or to translate, adapt and validate an existing one instrument. The development of the instruments demands a high cost, prolonged time and limitations in terms of other countries. Thus, most of the researchers prefer to adapt and translate test due to its economic and practical effectiveness. Therefore there is a need in Pakistan to translate and adapt tests not only for adults but also for children, as far as possible. In this current research, Revised Children Manifest Anxiety Scale (RCMAS-2; Reynolds & Richmond, 2008), was selected for the translation and adaptation purpose. First of all the copy right to use this scale was obtained from the publishers of Western Psychological Service (WPS), Los Angeles through fulfillment of all requirements. Before writing the details, brief description of RCMAS-2 is presented below.

Revised Children's Manifest Anxiety Scale (RCMAS-2)

The Revised Children's Manifest Anxiety Scale (RCMAS-2) is a self-report instrument which has 49- items, and is designed to assess the anxiety in children from 6 to 19 years old. Child responds to each statement by indicating "Yes" and "No".

The RCMAS-2 yields scores for the six scales. Defensiveness and Inconsistent Responding are validity scales and the remaining four scores includes Total Anxiety score and scores for these anxiety-related scales

Physiological Anxiety, Worry and Social Anxiety (Reynolds & Richmond, 2008).

Short Form Total Anxiety (SF-TOT)

It is consist of first 10 items of RCMAS-2, and is completed in less than 5 minutes. These 10 items covers three scales of anxiety, three of the items are from the Physiological Anxiety scale, four are from the Worry scale, and there are from the Social Anxiety scale. The short form reflects the overall level of anxiety experienced by child (Reynolds & Richmond, 2008).

Sample and Procedure

The process of translation and adaptation can be broken down in to following steps:-

(a) Translation and adaptation process and
(b) Verification of psychometric properties, like reliability assessment of the instrument in the present case.

Adaptation and Translation of RCMAS-2

In present study to deal with issues of usability and reliability following steps are taken:-

i) Formulation of Translation Committee: The translators involved in the translation procedures must be highly qualified with good methodological acquaintance and full understanding of the both source and target languages (Hambleton, 2005). By taking into consideration all these requirements the four bilingual experts of both source and target language and two bilingual students' Ph D fellows were taken as a part of committee.

ii) Forward Translation: As mentioned by Hambleton (2005) the forward translation is one crucial step for adaptation. To acquire this purpose of forward translation the four experts who had been chosen as translators, translated the test from target language to source language individually. The committee then finalized the draft which conveyed the similar logic and sense as original English version.

ii) Backward Translation: In the back-translation design, the adapted test which is in target language was translated back to the source language by the group of translators who are mental health professionals, who

translated back to the source language independently and individually (Hambleton, 2005). In this procedure unsatisfactory items are rephrased by committee.

iii) Cross Language Validation:
After the step of translation and adaptation, the "single-group bilingual design" was used for the cross language validation study (Sireci, 2005). The adolescents were selected because of the required attributes of the bilingual design that examinees must be proficient in both languages. In Pakistan young children are not expert in both languages. Both Urdu and original English version of Short Forms of RCMAS-2 were administered on single group of bilingual test takers. However, the administration of both Urdu and original English RCMAS-2 were counterbalanced. It was mentioned by Sireci (2005) that one of the draw back of single bilingual design using single group is the practice effect and familiarity with the items in the first test form may affect examinees responses to the corresponding item in the second test form. Although counterbalancing feature may adjust for this drawback to some extent.

So by applying counterbalancing, about half the examinees (25 adolescents) had taken the test in English language (original version of RCMAS-2), and the other half (25 adolescents) had taken the Short Form in target language. After the time interval of one week, same examinees were contacted for their responses. The procedure of first assessment was repeated, the difference in second trail was that the half 25 adolescents who had completed Short Form in source language (English) in first trail had given Urdu (target language) version of Short Form this time and other half 25 adolescents who had completed the Urdu version in first trial, had given English (original) version of Short Form of RCMAS-2 form. Although counterbalancing feature may adjust for this drawback to some extent.

Reliability

In the second stage, the reliability studies were conducted to establish test retest reliability and internal consistency. The sample of 100 (54 males & 46 females) children and adolescents, completed the Urdu version of Short form of RCMAS-2 first and then second time after the time duration of one week, original English version was completed by the same subjects.

Statistical Interpretation

For the interpretation of results, the data is transformed in to statistic form for the clear vision of outcomes of the research. The Statistical Package for Social Sciences (SPSS, version 13.0) was used for the calculation of Cronbach's Coefficient Alpha and Pearson Product Moment Correlation coefficient.

RESULTS

Table 1

Cross Language Validation (item by item) of Urdu and English Versions of Revised Children's Manifest Anxiety Scale (RCMAS-2)

Item No	Correlation Coefficient
1	.604*
2	.749*
3	.734*
4	.855*
5	.724*
6	.781*
7	.565*
8	.810*
9	.766*
10	.703*

N = 50; 1-week inter-test interval, *correlation is significant at .01 level (2-tailed)

Table 2

Cross Language Validation between Short Forms (SF-TOT) of Urdu and English versions of Revised Children's Manifest Anxiety Scale (RCMAS-2)

Scale	*N*	*r*
SF-TOT	50	.618**

Note: **Correlation is significant at .01 level, 1 week inter-test interval

r = Pearson Product Moment Correlation

SF-TOT = Short Forms of Urdu and English versions of Revised Children's Manifest Anxiety Scale (RCMAS-2).

Table 3
Reliability Estimates of Short Form of RCMAS-2

Scale	Cronbach's alpha	Test retest *r*
(SF-TOT)	.5188	.855

N=100; 1-week inter-test interval.

Table 4
Inter-correlations between Urdu Version and English Version of Short Form Total Anxiety (SF-TOT) and Total Anxiety (TOT) of RCMAS-2

Scale	(TOT) Urdu version	(TOT)English version
(SF-TOT) Urdu version	.751*	.412*
(SF-TOT)English version	.542*	.689*

N=50; 1-week inter-test interval, *correlation is significant at 0.01 level (2-tailed)

DISCUSSION

The center of attention of current research was to evaluate the reliability of the Short Form Total anxiety (SF-TOT) score of Revised Children's Manifest Anxiety Scale (RCMAS-2; Reynolds and Richmond, 2008) in the children and adolescents of Pakistan. The reliability study comprises of internal reliability and test retest reliability of Urdu version of short form (SF-TOT) scores.

The cross language validation was done to established test and test items equivalence of short forms of RCMAS-2. By this procedure the equivalence between the both source language version and target language version was calculated and results shows significant correlation between both versions of short form which are shown in Table1 and Table 2.

The test retest estimates obtained from the sample of 100 children shows that test retest reliability for short form (SF-TOT) was (.855). The results support the temporal stability of Urdu version of (SF-TOT) as shown in Table 2.Estimate of the how well a set of items estimates the score that would have been obtained, had all the possible questions been asked are commonly referred to as estimates of internal consistency reliability and are used to estimate errors of domain

sampling (Nunnally, 1978, Reynolds, Livington, & Wilson, 2006). The Cronbach's alpha for Short Form is (.518).The lowest Cronbach's alpha for the (SF-TOT) may be due to heterogeneous nature of the items on the short form. The results underscores that the TOT score should be used whatever possible because it is recommended that all items of RCMAS-2 must be administered whenever possible. The inter-correlations between both Total Forms (TOT) and Short Forms (SF-TOT) of Urdu and English versions of RCMAS-2 are also shown in Table 4.

Anxiety is manifestation of the development of such feelings and fears which are abnormal and they are developing in normal situation. Educational institutes like schools and colleges and their relevant variables are one of the major causes of anxiety in children and adolescents (Reynolds & Richmond, 2008). In Pakistan children are also victims of the tide of increasing political and ethnic violence. Due to the high prevalence of anxiety in Pakistan there is a constant need for such instruments that are translated and adapted in our language and this adaptation of testing instruments facilitates the test development. To deal with this requirement the focus of present study is on the psychometric evaluation of Short Form Total Anxiety (SF-TOT) because this will fulfilled the necessity of brief measure of anxiety for with the large number of data for screening and research purposes (Reynolds &Richmond, 2008). Such attempt would also be beneficial for not only children in clinical settings but also for the academic setup as well.

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MEASUREMENT OF PARENTS' ATTITUDE TOWARDS THEIR MENTALLY RETARDED CHILDREN: A STUDY CONDUCTED AT QUETTA, BALOCHISTAN, PAKISTAN

Muhammad Azam Tahir
Department of Psychology
University of Balochistan,Quetta
and
Muhammad Saleem
Department of Applied Psychology
The Islamia University Bahwalapur

ABSTRACT

The study attempts to ascertain the attitude of parents of children with mental retardation towards their mentally retarded children. The sample consists of 60 parents (mother and father) of children diagnosed as mentally retarded. Data collection was done at the Complex for Special Education, Brewery Road, Quetta Pakistan. Parental age group is 25-50 yrs. The tool used for the measurement of variables was 25 items structured 5-point Summated Category Partition Scale of Index of Parental Attitudes (IPA) Steven (1968), and a Personal Data Sheet. Subjects have been grouped on the basis of Socio-economic Income Status, and Education. The data were analyzed using Mean, Standard Deviation and t-test. The results indicated that mothers have a more positive attitude towards their mentally retarded children as compared to fathers (t (58) =2.66; p<.05). Educated parents were with more positive attitude towards their mentally retarded children (t (58) =3.12; p=<.05). Parents with high socio-economic status showed a more positive attitude (t (58) =3.57; p<.05). Results are discussed keeping in view the purpose of the study. Limitation and suggestions for further studies are presented.

INTRODUCTION

Cognitive disabilities at childhood are a major public health problem around the globe. Its impact does affect significantly these cognitive disabilities in relation to the quality of life and performance, not only for disabled children but also as a whole for families and societies. In under developed countries like Pakistan where the prevalence of risk factors for childhood disabilities and the age configuration of populations are judged though the young, the requisite for public health projects to avert these disabilities is especially manifested. Effective deterrence, nevertheless, needs better awareness on risk factors and causes than it is currently available for populations in the world less developed (Durkin, et al., 2000).

A series of definitions of mental retardation have been used in the past. An earlier version of the AAMR definition was incorporated into PL 94-142, The Education for All Handicapped Children Act of 1975. However, today's most widely established definition has been given by the American Association on Mental Retardation (AAMR). The most recent AAMR definitions described mental retardation as "significantly sub-beverage general intellectual functioning resulting in or associated with concurrent impairments in adaptive behavior and manifested during the development period" (Grossman, 1984).

Wherein adaptive skills include those daily living skills needed to live, work, and play in the community. They include communication, self-care, home living, social skills, leisure, health and safety, self-direction, functional academics, community use, and work.

Adaptive skills are evaluated in the person's typical environment across all parts of an individual's life (Cobb & Mitter, 1980). The Arc (1982) reviewed a number of diagnostic studies in early 1980s and concluded that 2.5 to 3 percent of the general populations have mental retardation. On the basis of 1990 census, an estimated 6.2 to 7.5 million individuals have mental retardation around the globe (Batshaw, 1997). Mental retardation prevails across the lines of racial, ethnic, educational, social, and economic backgrounds. It can occur randomly in any family. One out of ten American families and is directly affected by mental retardation (AAMR, 1992). Nevertheless, in each country approximately 1% of the population has mental retardation (AAMR, 1992).

For Pakistan, it has been reported regarding the prevalence of mental retardation, denoted against cognitive disability prevalent early in life and by

dearth in intellectual functioning (intelligence quotient (IQ)) and adaptive behavior amid children to be (IQ < 50) and 14.4/1,000 children aged 2–9 years (95 percent CI: 7.8, 21.1/1,000) for serious mental retardation; however, 5.9/1,000 children aged 2–9 years (95 percent confidence interval (CI): 3.4, 8.4/1,000) for mild mental retardation (IQ. 50–70). These incidence estimates has been alike in urban and rural populations sampled (Durkin, et al., 1998).

Disabled persons have not yet acquired much attention within Pakistan (Miles, 1982), nor their opinion has been asked widely so far (Miles, 1980). Miles (1983) reported in his research various responses on the birth of a handicapped child, especially among the people with low socio-economic income status. He revealed that millions of absolutely poor families, at the birth of a disabled child, put themselves into even worse condition than their neighbors. It badly affects siblings' marriages as well. The expenses of feeding of the child can not be predictable to return in terms of employment, earning, and care of parents when they are old. It is not at all surprising, in these situations, that those disabled children are considered as a punishment, curse, and a heavy burden on the family (Menolascino & McCann, 1983).

According to Abdullah (1981), the attitude in general of the community towards the disabled is one of insensitivity, unresponsiveness, or ill-sympathetic. Yet, parents of disable children usually do not have an encouraging or positive attitude. On the contrary, it is attached with shame and dread of social contempt and stigmata. Additionally, as a superstitious idea, the same is taken as the will of God and even in many instances it is taken as the fury of God in punishment to our pervious sins.

Usually people take the disability as a curse result of their sins and as a result people think it best to submit themselves to the will of God. Ultimately, people do nothing for their disables. Rather they conceal the disables from the community due to the fear that people would make fun and/or consider inferior any way (Kazim, 1982; & Khan, 1979).

Recently there has been growing concern over the quantity and quality of care services offered to handicapped children in Pakistan. These concerns are due to the acknowledgment and understanding of the fact that the adjustment of a handicapped child within a society is affected not only by his/her basic handicap, but is also considerably affected by the type and quality of stimulus presented in his/her daily livelihood and interpersonal interaction within the environment

provided. This concern has also grown due to the realization that a child is usually being put isolated from the social group i.e. family (Beck, 1959; Hallan & Kauffman, 1982).

The extent of the condition of handicapped children in Pakistan is massive due to the complication and assortment of the problem. There have been no specific reliable studies on a national scale for the estimation of mentally retarded children. However, in 1972 a joint study was conducted by Jinnah Postgraduate Medical Centre, Karachi Pakistan and Central Statistical Office, revealing the occurrence of Mental Retardation as 3.92% (Tareen, 1979).

Though the Institutes for the mentally retarded persons run by the government are few in number still, the year 1981, having been declared as International Disabled Year, Pakistan Government have enforced with a greater threshold for the betterment of mentally retarded and other handicapped the Government of Pakistan focused upon various rehabilitative projects including attitude change campaigns for general masses through media. Government has established residential complexes for the handicapped and mentality retarded children and some vocational training workshops for such children and adults against National Pilot Project (Hunzai, 1993).

The stigma and denial associated with disable people is a widespread problem, which in some cultures is a deep-rooted cultural and religious chauvinism (Wang, 1992; Rogers, 1998). Unpleasant facial appearance can exacerbate related problems and strengthen the social segregation of such individuals from the relevant social group (Albino et al., 1994). Various cultural social and psychological, variables are implicated in make a decision whether a person becomes aware of it and consequently the demand for rectification (Shaw, 1981).

Referring one view, the existence of a child with special needs mounts a catastrophe in the family. Most clinical annotations reflect that parents frequently are depicted with the demonstration of guilt, frustration, ambivalence, displeasure, anger, embarrassment, and grief (Schild, 1971; & Fernall, et al., 1988).

A study was conducted by Friedrich and Friedrich (1981) to study the dissimilarity between parents of mentally non-handicapped and handicapped children. The results suggested that parents of handicapped children did report

less pleasing marriages, less social sustainability, poorer physical well-being as compared to the parents of non-handicapped children. Several aspects have been relevant to the attitude of parents towards their handicapped children. These issues include sternness of the handicap (Grossman, 1982), social un-acceptability of handicap (Farber, 1959), variety in the socio-economic status of parents, gender and age of the child (McGuire, 1985; & Boles, 1959) and level of religious practices (Hurely, 1969).

Rationale of the Study

The present study was aimed to explore and collect information about the attitudes prevalent in families with a retarded child. The investigation of this research problem is important due to several reasons. As the study of parental attitude towards mentally retarded children is a significant source of information to be used in guiding parents to understand the role they play in the life of such a child and how they can help their child within the cultural aspect of Pakistan. It has commonly been observed that the family background contributes significantly to personality development of mentally retarded. It is presumed that happy and conducive environment at home, with a positive attitude helps the child towards his/her better adjustment.

Attitudes do not remain static as the social changes bring about change in attitude. Additionally, the attitude towards the specific ailment and its treatment does change accordingly. It is studied that change in values determines attitude and in turn behavior. In Pakistan, parental attitudes have not been explored extensively. Many schemes have been incorporated for the general development of mentally retarded children. This study would help in formulating parent guidance programs. So far, such programs have not been executed although there is a grave need for parental guidance. It is assumed that parental guidance programs will help better in understanding child's disorder and enhance their treatment process.

The present study would serve as a guideline for further research projects for handicap children. Despite its limitations it will carry great value and significance to the field of child development.

The aim of the research is to establish an insight into the problem within an informed group of people through quantitative data from a representative sample of research participants. The purpose of the research is to satisfy the research questions through the application of scientific procedures.

Objectives of the Study

1. The study carries the following two main objectives with the aims: To study the parental attitudes – both father & mother - toward their mentally retarded children.
2. To explore the impact of extraneous variables like education, socio-economic status, etc. on the attitudes of parents of mentally retarded children.

Hypotheses

Following hypothesis have been formulated for the present research:

1. Mothers will have positive attitude toward their mentally retarded children as compared to fathers.
2. Educated parents (having qualifications until 10^{th} grade and beyond) will have positive attitude toward their mentally retarded children as compared to less educated parents ((having lesser qualifications than 10^{th} grade).
3. Parents belonging to higher socio-economic status will have positive attitudes toward their mentally retarded children as compared to parent belonging to low socio-economic status.

METHOD

Sample

The sample consisted of parents of mentally retarded children, belonging to various socio-economic status and qualifications. A Total sample of 60 parents of mentally retarded children, using purposive sampling technique however selected randomly from the complex for special education, Brewery Road, Quetta Pakistan.

Measures

Index of Parental Attitudes (IPA) given by Hudson (1993) was used as an instrument in this study. The IPA scale consists of structured on 25 items with responses on 5 point Likert type. The scale was completed by each parent with respect to their relationship with a special and specific child. In addition to IPA,

separately developed personal profiles having the variables like age, gender, educational level and socioeconomic status was also used.

The Index of Parental Attitudes

The Index of Parental Attitudes (IPA) is one of the nine scales on clinical measurement package (CMP) developed by © Hudson (1993) designed to measure the severity of the problem or problematic behavior of the parents (Parents and Children) i.e. perceived attitude of the parents. This scale permits the subjects to characterize the severity of intra-attitudinal problem in a global manner. IPA can be used as a measure of the parental attitudes towards their mentally retarded children.

In IPA, some of the items are positive while some are negative to partially control the response set biases. All of the items were randomly ordered. Score range of each item was between 1 ~ 5. For each item, a score of five was assigned to a response option showing the most desirable behavior; however, the items negative items were reverse scored. Validity and reliability of the scale was also calculated after pilot study and found to be appropriate.

Procedure

The questionnaire was individually administered to the sample. The sample, on the other hand, was selected through the addresses of the parents of the handicapped children provided by the complex for special education, Brewery Road, Quetta Pakistan. Verbal introduction was also given about the purpose of the research. The questionnaire was filled in the presence of the researcher. Some of the sample members were hesitant in cooperating with the researcher, as they were not sure of their anonymity. Such participants were provided with the assurance that their responses will be used solely for the research purpose and confidentiality will be maintained. Later on, the responses were scored according to the rules indicated in the preceding sub-section and results were derived.

RESULTS

For measuring the attitude difference between mothers and fathers of the mentally retarded children, Mean and Standard Deviation and t-values were calculated so that a comparison between the scores of the mothers and fathers of

the mentally retarded children is revealed. Whereas, same values were calculated for measuring the differences between the scores of educated, uneducated and low socio-economic status and/or high socio-economic status, on IPA attitude scale.

Hypothesis 1

Mothers will have positive attitudes towards their mentally retarded children as compared to fathers.

Table 1
Comparison between mean scores of the mothers and fathers on attitude scale

Gender	*N*	Mean	*SD*	Calculated *t*	Table value
Mothers	24	42.83	11.86	2.66	2.00
Fathers	36	49.91	9.01		

Hypothesis 2

Educated parents (having qualifications until 10^{th} grade and beyond) will have positive attitude toward their mentally retarded children as compared to less educated parents (having lesser qualifications than 10^{th} grade).

Table 2
Comparison between mean scores of the educated and uneducated parents

Qualifications	*N*	Mean	*SD*	Calculated *t*	Table value
Educated	23	42.09	13.54	3.12	2.00
Uneducated	37	50.19	7.14		

Table 2 shows the t-value of the educated and uneducated parents on IPA attitude scale. Results indicate that there is a significant difference between the attitude of educated and uneducated parents towards the mentally retarded

children, since the mean scores of educated and uneducated depict a clear difference. According to t-value presented in table, the calculated value of *t* is exceeding the table value of *t*.

It means Ho is rejected however H1 is accepted that is educated parents have a positive attitude towards their mentally retarded children as compared to uneducated parents. Therefore, the hypothesis 2 is accepted.

Hypothesis 3

Parents belonging to higher socio-economic status will have positive attitudes toward their mentally retarded children as compared to parent belonging to low socio-economic status.

Table 3
Comparison between mean scores of high and low socio-economic status

Socio-economic status	*N*	Mean	*SD*	Calculated *t*	Table value
Low	34	48.82	10.48	5.57	2.00
High	26	44.81	10.83		

The t-value on attitude scale presented at table-3 indicates that there exists a significant difference among low and high socio-economic status (SES) parents' attitude towards their mentally retarded children. Whereas the mean scores of both parental groups also indicates a difference. The high socio-economic status parents have high scores on the attitude scale than low SES parents. According to t-value shown in table, the calculated value of t is exceeds the table value of t. It means that H0 is rejected while H1 is accepted. It dictates that the parents belonging to high socioeconomic have positive attitude towards their mentally retarded children as compared to parent belonging to low socioeconomic status.

DISCUSSION

A number of parents understand the implications of retardation and adopt their lives accordingly. Nevertheless, those who are unable to do so, face years of denial, frustration and increased family stress. New born child learns from his

primary care givers through the principles of interaction and social adjustment. Retarded child is unable to think, act and learn as spontaneously as the normal child, because he / she lack the ability. Resultantly it relies upon the parents to exert their efforts and energies towards their special child, and provide in the conducive environment.

Parental feeling about the child's shortfalls sets their tone for interaction with the retarded child. Parents are the source of learning, stimulation and guidance for the child. Parents lay the basis of cognitive development of their ward.

There is ample research, which emphasizes positive relations between parents and child. The child-rearing practices for normal children are also applied to retarded children.

On the basis of theoretical knowledge and empirical studies, it was found that attitude of parents is an important aspect in training, guidance, learning and understanding the problem of the child.

The present study was aimed at exploring the attitude of parents towards their retarded child. It was specifically conducted to record perceptions of parents regarding attitude towards responsibilities as the parents of the special children on the basis of gender of the parents. The main hypothesis of the study was that is there any significant difference between the attitudes of mothers and fathers of mentally retarded children. The results of the study showed that there is exists significant difference between the attitudes of mothers and fathers of MR children. Generally there is a societal concept that mother are more caring, loving and concerned about the child and his / her problems. However, the fathers are less concerned and less involved in child-rearing activities. It may be hypothesized that mothers would have more positive attitude towards their children, especially, in the case of a special child. In fact, they need more care and attention as compared to normal children. Mothers seem to have sometimes sympathetic and sometimes empathetic behavior toward such child. It is mostly related with less positive attitudes towards their special child and his / her problems.

Secondly, the difference between mothers and fathers' attitude towards the mentally retarded children can be the male inexpressiveness. Due to the fact that father's behavior has care and affection but does not become obvious as the

other hand, however, mothers are more expressive. Fathers may also get worried about their child but they can not express their concern because of certain Stereo typical behaviors attached to their sex roles. Additionally fathers are more occupied with external world and this can be the misleading reason for the misperception of male roles, especially father's role in our society. Therefore it can be concluded that there exists a difference between attitudes of mothers and father of mentally retarded children. The results of present study reflect a significant difference in their attitudes.

The results of the present study revealed that there is a significant different in both the groups on both the variables. The mean scores on the variable of education showed a difference as significantly mean scores of educated group remained higher than the uneducated group. It reflected that educated parent have more positive attitude towards their mentally retarded children then the uneducated parents.

The mean scores on socio-economic status showed that there is a significant difference. Mean scores of high socio-economic status remained higher than the low socio-economic status group. Results suggested that the mean scores of the parents of high SES were also more positive than the parent of low SES.

Conclusion

This study confirms the previous research results that education and socio-economic status do influence the attitude of the parents of mentally retarded children. Conclusively all the hypothesis of the present research remained accepted. Therefore, it could be synthesized that mothers are more affectionate in Pakistan to their mentally retarded children. Similarly, parents with high socio-economic status and with higher education level possess more positive attitude towards their MR children.

Limitations

1. The research was conducted on a small sample of 60 parents with comparatively less range of socioeconomic status and education level.
2. The sample was taken from only one complex / center; however, it lacks representation of verity of respondents.

Suggestions

1. Another study may be conducted in Balochistan Pakistan with a greater sample and representation of variety of respondents.
2. The future study may include various measures to change the attitude of the parents as well.

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EXPLORING DETERMINANTS OF ACADEMIC ACHIEVEMENT AMONG COLLEGE STUDENTS OF AGE BETWEEN 16-18 YEARS

Hina Imran, Zaeema Riaz
and
Tariq Mehmood
Institute of Clinical Psychology
University of Karachi

ABSTRACT

This study was designed to assess the effect of emotional intelligence and self esteem on academic achievement of adolescents. It was hypothesized that: "Emotional Intelligence and self esteem would predict academic achievement of adolescents". The sample consisted of 112 college going adolescent students (61 males & 51 females) between age ranges of 16 to 18 years. Entire sample was recruited from middle socio economic status. Initially the participants were requested to fill the demographic form and then to measure the level of Emotional Intelligence and Self Esteem, the Trait Emotional Intelligence Questionnaire (TEIQue-SF; Petrides, & Furnham, 2003) and Rosenberg Self Esteem Scale (Rosenberg, 1965) was administered respectively. Multiple regression analysis was used in order to explore the predictive relationship of Emotional Intelligence and Self esteem with academic achievement. Results showed Emotional Intelligence and Self Esteem as significant predictors of academic achievement (R^2 = .156, F (2, 109) = 10.067, p<.001).

INTRODUCTION

Gallagher (2005) defines emotional intelligence as "the ability to utilize personal and others feelings and emotional aspects and make its application feasible to guide cognitions and behavior. Emotional Intelligence is "multifactorial arrays of interrelated emotional, personal, and social abilities

that help us to cope with daily demands" (Bar-On, 1997). Cooper, (1997) stated the significance of emotional intelligence in such a way that "experience more career success, build stronger personal relationships, lead more effectively, and enjoy better health than those with low [emotional intelligence] EQ". One of the basic components of emotional intelligence is individual's capacity to recognize and understand personal emotions and others emotional level (Schutte, Malouff, Simunek, Mckenlly & Hollander, 2002), thus individual with high emotional intelligence, he or she would demonstrate social skills in better way and deal stressors appropriately.

The significance of emotional intelligence in predicting academic achievement has been discussed by various researches. According to Gardner (2006), higher emotional intelligence is a key to success in every field of life including academic success and better mental health. Some neuroscientists and educationists also argued that the occurrence of learning is dependable on the emotion and that emotional links play crucial role in memory, reasoning and deep learning. While as Ghosn (1999) reported that children's low emotional well-being is potentially negative not only for academic achievement but personal relationship as well. Recent research work by Parker, Summerfield, Hogan and Mjeski (2002), revealed the fact that numerous emotional and social capabilities play vital role as predictors of academic success, others opposes like Pinnegan (1998), that the environment of school facilitate students in attainment of those capabilities underlying the emotional intelligence, this learning plays significant role in the formal education of the child. In fact, recently the researches were attracted and developed interest in study emotional intelligence in relation of academic performance or career success.

Emotional intelligence is also a very important aspect for mental health. According to Hamachek (2000, cited in Ahmad, Imran & Mahmood, 2009), the development of emotional intelligence has its significance in exploring one self in different life situations. This self understanding makes a person's mental health positive and better. Perception and understanding of emotions of high emotionally intelligent people tend to prevent maladaptive emotional states such as mood and anxiety. High emotional intelligence also contributes to positive self esteem. In a study conducted by Ahmad, Imran and Mahmood (2009) on adolescents of age 16-18 years found that self esteem is positively related to emotional intelligence.

Like emotional intelligence, self-esteem is another factor that influences nearly every aspect of person's overall well being and academic performance. Rosenberg (1965) defines self esteem as "The totality of the individual's thoughts and feelings having reference to him/her self as an object". A vast majority of studies reported (cited in Garaigordobil, et al., 2005) self-concept/self-esteem inversely related with different psychopathological symptoms (Bohne, Keuthen, Wilhelm, Deckersback & Jenike, 2002; Dowd, 2002; Fan & Fu, 2001; Hoffmann et al., 2003; Kim, 2003; Valentine, 2001); with problems in social functioning and school dropout (Muhs ,1991). Richardson and Rayder (1987) also reported that low self-esteem and low school achievement are directly correlated.

Research Aim

Evidences suggested emotional intelligence and self-esteem are two important factors that not only contribute to mental health but to increase academic performance in children, adolescents and adults. As majority of previous studies reported significant association of academic achievement with emotional intelligence (e.g. Parker, et al.,2004., Parker, et al.,2003., Fannin , 2001., & Abisamra, 2000) and self-esteem (Brown & Alexander, 1991; Gans, Wood, Beech, Taylor, & Michela, 1994; Orenstein, 1994).Therefore present study aim is to find out the significance of emotional intelligence and self-esteem as the predictors of academic achievement in adolescent students between ages of 16-18 years in Karachi, Pakistan.

METHOD

Sample

Present study was conducted in different colleges of Karachi Pakistan. The sample consists of 112 adolescents (61 males & 51 females). The ages of participants ranged from 16 to 18 years with the mean age of 16.65 years.

Following criteria had been set for the participants for inclusion/exclusion in this study:

a) Adolescent students between ages 16 to 18 years
b) Adolescent students from middle socio economic status only
c) Both parents were alive
d) Children of divorced or separated parents were excluded and
e) Physically disabled adolescents were also excluded and

Procedure

After getting permission from authorities, randomly selected adolescents were approached in their classrooms. For further scrutiny of sample the demographic data sheet was filled in. It consists of items focusing on individual's demographic information e.g. age, sex, birth order, family structure, monthly income of family and academic grades etc. The entire sample was belonged to middle socio economic class. Socioeconomic status of the participants was determined on the basis of total monthly income of family according to the criterion given by Federal Bureau of Statistic of Pakistan in 2001(cited in Ahmad & Khanam, 2005). According to this survey in Pakistan middle socio economic status has earned income per month of 14000 to 30000.

All the participants were asked about their academic percentages of last final exams and obtained percentages were also confirmed from the official record of their colleges. Then Urdu version of Trait Emotional intelligence Questionnaire and Rosenberg Self Esteem scale were administered. All scales were administered in group setting of maximum 15 participants at once.

Measures

Trait Emotional Intelligence Questionnaire (TEIQue-SF)

The Trait Emotional Intelligence Questionnaire-Adolescents Short Form (TEIQue-SF; Petrides & Furnham, 2003) is a simplified version in terms of wording and syntactic complexity of the adult short form of the TEKJue. The scales include 30 statements which were derived from the 15 subscales of the Adult Trait EI sampling domain (two items per subscale). Participants have to respond to on a seven point Likert Scale. Higher score on the TEIQue-SF indicate higher level of trait emotional intelligence. For the current research this scale was adapted and translated through standard and systematic procedure in national language (Urdu) of Pakistan.

Rosenberg Self Esteem Scale

Rosenberg Self Esteem scale (Rosenberg, 1965) measures the global self-esteem. The scale consists of 10 items answered on a five-point Likert scale from 'strongly agree' to 'strongly disagree'. Negative items are reverse

coded so that a high score continues to indicate high self-esteem. The possible range of scores for this scale is 10 to 50.

Statistical Analysis

In order to examine the data statistically, SSPS, Vol. 12 was used for statistical analysis. Descriptive statistics (mean and standard deviation) were used to obtain the demographic characteristics. Multiple regression analysis was applied to investigate the predictive relationship of emotional intelligence and self esteem with academic achievement (i.e. percentage of final exams) among college students.

RESULTS

Sample Characteristics

Table 1 represents Descriptive statistics of Demographic information of sample. Frequencies and percentages were mentioned for gender, education, and family structure of the sample. However for Family Income and age, mean and standard deviation is illustrated in the Table 1.

Table 1
Summary of Descriptive Statistics

Variables		*N*	%
Gender	**Male**	61	54.5
	Female	51	45.5
Education	**10 Yrs**	84	75
	12 yrs	28	25
Family structure	**Nuclear**	83	74.1
	Joint	29	25.9
Family Income	**Mean**	21000	
	St. Dev	5280	
Age	**Mean**	16.65	
	St. Dev	.611	

Table 2
Summary of Multiple Regression analysis with Self Esteem and Emotional Intelligence as Predictors of Academic Achievement

Predictors	*R*	R^2	Adjusted R^2	Durbin Watson	*F*	*df*	sig
Self Esteem and Emotional Intelligence	.395	.156	.140	1.831	10.067	2, 109	.001

Table 3
Coefficients

Model	Un standardized Coefficients		Standardized Coefficients	*t*	*p*
	B	*SE*	Beta		
Constant	71.098	3.168		22.440	.001
Self esteem	-.118	.130	-.090	-.912	.364
Emotioonal Intelligence	.099	.023	.428	4.325	.001

Table 4
Correlation between self esteem and Emotional Intelligence

Participants	*Pearson r*	sig
Total	.457	.001
Male	.523	.001
Female	.412	.003

DISCUSSION

The notion that emotional intelligence and self-esteem may be the associated factors of academic performance in late adolescence gets support from the results of the present study. Overall model including emotional intelligence and self esteem appears as significant predictor of academic

achievement, however further analysis indicate that only emotional intelligence is the factor that significantly predict the academic achievement, self esteem has very limited and insignificant role in this association.

Assessing the different academic levels revealed that academic success was associated with higher levels of emotional intelligence. This finding is consistent with the results of Parker et al. (2004) and trends support to the previous hypotheses of Lam and Kirby (2002) that high emotional intelligence contributes to increased motivation, planning and decision-making, which positively influence academic performance. Emotional quotient (EQ) as a distinctive factor that comprises self-awareness, self-regulation, motivation, empathy and social skills, these all leads a student towards better coping in academics (Goleman, 1998, Goleman et al., 2002).

Emotional Intelligence plays a vital role in determining the academic success. Because it facilitate our attitude and behaviors towards attainment of our goals as healthy emotions give clarity in perception, thinking and analyzing every day life situation. Emotional intelligence not only brings psychological wellbeing by making students good at interpersonal relationship, resiliency and stress management but also enhances their creativity which flourishes their academic success. Those people who are able to deal with life stressors and use problem solving strategies intelligently tend toward success, show good results and attain significant academic grades.

Conclusion

In conclusion, Emotional intelligence not only assists to mold and adjust ones mood, keeping in mind the demand of situation but it also helps to minimize the emotional strain by adopting optimistic view of life. To be fully healthy, happy and successful we need to have high self esteem, high self confidence and high emotional intelligence. As studies have also been established the relationship between emotional intelligence and self-esteem (e.g. Hollander, 2002, Sparrow, 2005, Petrides & Furnham, 2000, & Ahmad, et al., 2009). In present study we also found significant positive correlation between emotional intelligence and self esteem ($r = .457$, $p<.001$, table 4). Emotionally intelligent people can perform better; they have ability to manage their emotions, in solving and managing the different problems intelligently and have good decision making powers. It helps a person to handle pressure well and withstand adverse events without loosing their emotional sanity.

Emotional skills are fundamental building blocks that lead to an adolescent's academic success along with healthy personality. Rate of academic success is significantly high in highly emotional intelligent persons than those who have low emotional intelligence.

Thus it's emotional intelligence, which pulls all the resources of personality together and gives them structure. So an emotionally intelligent person is able to master the environment by using the problem solving abilities and realistic perception of the world without being overwhelmed by emotional states.

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ROLE OF INDIVIDUAL AND ORGANIZATIONAL FACTORS IN DECISION MAKING

Muhammad Naveed Riaz, M. Anis-ul-Haque and Bushra Hassan
National Institute of Psychology
Quaid-i-Azam University, Islamabad-Pakistan

ABSTRACT

The present study was conducted to examine the role of various individual and organizational factors in decision making styles including rational, intuitive, dependant, avoidant, and spontaneous. Urdu-translated version of General Decision Making Style Questionnaire (Scott & Bruce, 1995) was used to collect the data from the participants. A total of 300 bank managers were included in the current research. Purposive convenient sampling technique was employed in the present study. In order to investigate the mean differences, ANOVA and t-test were used in this research. Significant mean differences were found with respect to organizational and individual factors in decision making styles. Highly experienced managers were more intuitive decision makers as compared to relatively low experienced managers. Young and middle-aged adults were more rational decision makers than older adults. Managers belonging to public sector banks were more rational decision makers in comparison to private sector banks. No significant mean differences in decision making styles were found with respect to gender and management level. Finally, Implications and limitations were discussed.

INTRODUCTION

In organizations, first-class decisions are made by individuals acting alone, by individuals consulting with others and by groups of peoples working together (Nutt, 1999). Decisions are not made in vacuum. Decisions are made on

some solid basis. Decision researcher Dijon (1978) illustrates that decisions are based on four factors including facts, authority, experience, and intuition. An appropriate combination of all these factors provides comprehensive information to make inferences and to take a decisional action. In corporate sector organizations, managers make various types of decisions. Managers either make simple decisions that are operational or tactical in nature or they make strategic decisions over which organizational fate is dependent (Certo, Connelly, & Tihanyi, 2008). Yousef (1998) investigated that decision making styles are influenced by numerous individual and organizational factors in the organizations of United Arab Emirates which is a collectivist society.

Factors Influencing Decision Making

Organizational decision making is complex, multifaceted and multidimensional process which is influenced by numerous factors. Rowe and Boulgarides (1992) explains that the decision maker is influenced by various factors including personal needs (such as security, structure, support, recognition, opportunity, and rewards), pre-potent needs (such as frustration, anxiety, achievement, and control), organizational forces (such as policies, staffing, culture, productivity, and conformity), and environmental forces (such as government, society, competition, resources, technology, clients/customers). After the interplay of these forces the emergent behavior results in feelings, decisions, and actions.

Decision related factors can be broadarly defined into two categories including organizational factors and individual factors i.e. personal characteristics of the decision maker (Ali, 1989a; Yukl, 1994). Many researchers (Ali, 1989b; Ali & Al-Shakis, 1985; England, Dhirgra & Agarwal, 1974; Flowers, Hughes, Myers & Myers, 1975; Goodale, 1973) investigated that decision making styles of managers are influenced by many factors including national origin, organizational type, type of industry, type of education, age, socioeconomic status, organization size, and management level in the organization.

Management Level

In business settings, managers make various types of decisions depending on the management level and hierarchical positions in organization. Managers may make relatively minor decisions that are primarily operational or

tactical in nature. In contrast, managers may make more strategic decisions that involve larger outlays of capital (Certo, Connelly, & Tihanyi, 2008). Using Decision Style Inventory to investigate relationships between decision making styles and varying management levels, Pennino (2000) found that lower level managers displayed a behavioral decision making style (quest for support, low tolerance for ambiguity, and short term problem solving) and the individuals at high management levels displayed a conceptual style of decision making (creativity, risk taking, high tolerance for ambiguity and cognitive complexity). Researchers (Blankenship & Miles, 1968; Heller & Yukl, 1969) found that decision making styles of managers vary across management level

Problems that arise infrequently and have a great deal of uncertainty surrounding them are often of a strategic nature and are the concern of the top management. Problems that arise frequently with fairly certain outcomes come under the concern of lower level management. As the problems ranges form the most structured to unstructured in the same manner decision are programmed and non-programmed in nature. Middle managers in most organizations make both types of decisions. Programmed decisions are the decisions manger make in response to repetitive and routine problems. Non-programmed decisions are made for novel and unstructured problems that are complex and extremely important. The nature of the problem, how frequently it arises, and the underlying degree of uncertainty dictate at what level of management the decision should be made (Singh, 2001).

Gender Differences

Women are generally thought to be more intuitive and empathetic than their male counterparts (Brenner & Bromer, 1981), who are seen as analytical and logical problem solvers in the workplace (Loden, 1985). Despite this, women are often under-represented in management, where the use of an intuitive decision-making style is thought to be effective (Agor, 1989). Hablemitoglu and Yildirim (2008) found that female students were more likely to use avoidant decision making style in relation to rational decision making style. On the other hand, male students were more likely to adopt intuitive decision making style in relation to rational decision making style.

There is controversy regarding gender differences in decision making styles. Bariocco, Laghi and D'Alessio (2008) investigated that no gender differences were displayed on various decision making styles measured by

GDMSQ. In the same manner, numerous studies indicate that no gender differences exist with reference to decision making styles (Hablemitoglu, & Yildirim, 2008; Spicer & Sadler-Smith, 2005; Loo, 2000). Mau (2000) illustrates that decision making self efficacy is influenced by the nationality and gender of the decision maker.

Aging

Kim and Hasher (2005) investigated that older adults are more likely to employ intuitive decision making style (involving heuristic and information processing intuitively), while younger adults are more likely to adopt rational decision making style (characterized processing the information in an analytic and systematic manner). The results showed that older adults are less likely to change their decisions or decision making styles because of larger past experience in decision making. The results are to some extent consistent with the somatic marker hypothesis which illustrates that feelings and emotions (somatic markers) becomes associated with the positive and negative outcomes of a given response situation via lifetime experiences.

The basic premise that older adults make intuitive decisions as compared to young adults is also practically supported by Chen and Sun's (2003) study on the age differences in financial decision making task. Both older and younger adults were asked to sell a series of objects on maximum possible price. The buying offers were presented randomly. Both type of adults used heuristics. Older adults used heuristics that involve memorization of the first offer for each object whereas younger adults make a comparison of the first offer with all previous offers. Another important controversy was that older adults consistently used one heuristic whereas younger adults switched between two heuristics.

Spaniol and Bayen (2005) observed tranquil judgments in retired people, probably because of their difficulties with the working memory. Many researchers (Charness & Bieman-Copland, 1992; Craik & Salthouse, 1992) argue that working memory declines with age, thus limiting older peoples' capacity to monitor decision processes. On the other hand Dror, Katona, and Mungur (1998) suggest that age does not degrade the quality or the speed of decisions. Masoet, Yaman and Denizel (2009) discovered that older managers are less likely to be involved in rule-based decisions.

As people get aged, various aspects of brain and associated cognitive assets decline (Briggs, Raz, & Marks, 2001). In comparison with young adults, older adults have slower information processing speed, shorter working memory span, more difficulty inhibiting irrelevant information, and slower activation of relevant information (Chen & Sun, 2003). Meanwhile, older adults rely on satisfying heuristics involving less consumption of cognitive assets. Older adults have a tendency to display information selectivity in decision making compared to younger adults (Rafaely, Dror, & Remington, 2006). Researchers found that older adults adapt a holistic representation of information processing that involves less cognitive resources in decision making.

Experience

Experienced people are also more likely to employ intuitive decision making style (Bergstrand, 2001; Callan & Proctor, 2000). Some decisions are made under conditions of urgency and demand high technical expertise. Other decisions can be the product of a more deliberate analysis of information and data. Furthermore, many decisions are sequential or conditional; the decision made at one point in time will affect the decision options available at a later time. It is typically impossible for a leader to possess all the information needed to make an informed decision. Consequently, the ability to make obtain relevant information, the skill to know the differential importance of the information as it related to a given decision, and the capacity to weight various decision options are all critical leadership skills. Great leaders are skilled decision makers, or they know how to delegate the responsibility for decision making to others within the organization (Muchinsky, 2007).

Bryant (2002) defines intuitive decision making in terms of naturalistic decision making NDM which focuses on the real visible behaviors and situational factors including time pressure and knowledge. NDM consists of three qualities including (1) holistic evaluation of alternatives instead of feature-by-feature, (2) situational recognition and matching current courses of actions, and (3) opting a satisfying strategy instead of optimizing. This is the way experts make decisions in uncertainty and time pressure using broader cognitive methods of recognition, pattern matching and mental simulation. Finally, Intuitive decision making style is added by experience but does not necessarily results from it (Tasdelen, 2001).

Training and Education

Galotti, Ciner, Altenbaumer, Geerts, Rupp, and Woulfe (2006) define decision making as the way an individual approaches to cognitive tasks. Further, Petrides and Guiney (2002) suggest that decision making is a cognitive process and which is primarily governed by an individual's core values and beliefs. Dror (2007a) argues that the quality of policing is the brainchild of sound decision making. That's why, it is important to understand the role of cognitive factors in decision making. Dror (2007b) investigates that varies decision factors (like complexity), internal factors (expectations), and external factors (time pressure) should be taken into account while making decisions. In this regard, use of cognitive technology proposes new facilitative external factors that help in superior decision making. Thus technology contributes in higher quality decision making (Dror, 2005).

There are numerous decision related skills which determine leadership effectiveness including technical knowledge and cognitive skills. Such skills help in analyzing, understanding, and interpreting the causes of the problems and its possible solutions (Muchinsky, 2007). Specialized leadership training procedures are planned to equip leaders with various experiences that expand their knowledge, skills, elasticity and efficiency. Such programs assist in the deeper understanding of cultural diversity that leads to creative problem solving. Leaders are trained to make "out of box" solutions of the problems and to understand organizational issues from a broader perspective. Finally, leaders are prepared for risk taking and decision making in various scenarios (Fulmer & Goldsmith, 2001).

In organizations, ethical decision making should be focused (Winston, 2007). In Australia, teachers and students are well equipped with multi-cultural education that increases their understanding of the apparent and hidden cultural diversity issues in real life decisions related to family, relationship, and career decisions (Hesketh & Taylor, 2001). Technology in general and information technology in particular plays a vital role in teaching leaders regarding data based decision making (Information Technology & People, 2002) but most of the leaders are found reluctant in adopting new information technologies related to decision making (Townsend, DeMarie, Hendrickson, & Whitman, 2000). Researchers (Eisner & Strother, 1962; Gopala & Hafeez, 1964) found that decision making styles differ due to the type of education.

Public and Private Sector

Scott and Bruce (1995) explain that people adopt one decision making style or the other is also influenced by the context in which the decision has to be made. Intuitive decision making is more appropriate for the dynamic environments involving time pressures, risks, uncertainty (Bergstrand, 2001; Callan & Proctor, 2000) rather than public sector organizations involving uniform procedures and static atmosphere. Schwella and Ballard (1996) illustrates that decision making in public sector is highly complex and unpredictable in nature. Decision outcomes can not be anticipated at the time of decision making.

Posner and Schmidt (1982) argue that public sector managers are more inclined toward considering the feeling and impressions rather than analysis and logic. Such managers are flexible in decisional choices. They do not make quick judgments rather they welcome variety of information regarding the issues. They take into account the overall perspective and make a decision. Finally, Rowe and Mason (1987) illustrates that individuals have a dominant, backup and least proffered style of decision making. On the basis of above mentioned literature following hypotheses were formulated:

H1. Top managers are more likely to employ intuitive decision making style as compared to middle and lower level managers.
H2. Female managers are more likely to employ intuitive decision making style as compared to male bank managers.
H3. Male bank managers are more likely to adopt rational decision making style as compared to female bank managers.
H4. Highly experienced managers are more likely to adopt intuitive decision making style as compared to less experienced managers.
H5. Older adults are more likely to adopt intuitive decision making style as compared to younger adults.
H6. Managers having soft skills training are more likely to adopt rational decision making style as compared to managers without soft skills training.
H7. Managers having professional education are more likely to adopt rational decision making style as compared to managers with non-professional education.
H8. Public sector bank managers are more likely to employ intuitive decision making style as compared to private sector managers.

METHOD

The core objective of the current research was to examine the role of various individual (gender, age, education, and experience) and organizational factors (management level and organizational type) in opting specific decision making styles by the bank managers.

Sample

A purposive sample of 300 bank managers including male (n = 285) and female (n = 15); top managers (n = 13), middle managers (n = 31) and lower level managers (n = 256) from public sector (n = 130), and private sector (n = 170), participated in the present study. Purposive sampling technique was employed in the present research. During the selection of the sample, prior defined full time job experience of at least one year and supervision of five employees was insured to confirm that the participants were practically involved in the different relevant corporate operations including leadership and decision making practices

Measures

General Decision Making Style Questionnaire (GDMSQ) was originally developed by Scott and Bruce (1995) and it was translated in Urdu by Batool (2003). The questionnaire is a self report measures that measures the concerned individual's perception regarding his or her decision making style. GDMSQ comprised of five sub-scales including rational, intuitive, dependant, avoidant, and spontaneous decision makings styles. The questionnaire consists of 25 five items in which each style is comprised of five items. GDMSQ is a questionnaire with Likert-type five point rating scale.

RESULTS

In the current investigation, t-test and One Way Analysis of Variance (ANOVA) were employed in order to identify the mean differences in decision making styles of bank managers due to various individual and organizational factors.

Table 1

Comparison among managers belonging to top, middle, and lower level management on sub scales of General Decision Making Style Questionnaire

GDMSQ	Top Management (n = 13)		Middle Management (n = 31)		Lower Management (n = 256)			
	M	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
Rational	21.46	1.664	21.20	2.320	20.14	2.311	4.714	.010
Intuitive	15.42	2.928	18.16	3.624	18.44	2.943	6.247	.002
Dependent	18.15	4.160	18.09	3.399	18.54	3.473	.284	.753
Avoidant	8.69	3.301	12.48	3.677	12.72	4.133	6.104	.003
Spontaneous	13.76	2.618	13.93	2.594	14.85	3.722	1.393	.250

Between groups $df = 2$; Within group $df = 297$; Groups total $df = 299$

Table 1 shows the results of One Way Analysis of Variance for the subscales of GDMSQ with respect to three management levels including top, middle, and lower management. The results indicate significant differences in rational ($F = 4.714$, $p < .01$), intuitive ($F = 6.247$, $p < .01$), and avoidant decision making style ($F = 6.104$, $p < .01$). The results show no significant differences in dependent ($F = .284$, $p > .05$) and spontaneous decision making style ($F = 1.393$, $p > .05$).

Table 2

Comparison between male and female managers on sub scales of General Decision Making Style Questionnaire

GDMSQ	Male Managers (n = 285)		Female Managers (n = 15)			
	M	*SD*	*M*	*SD*	*t*	*p*
1. Rational	20.34	2.325	19.53	2.099	1.328	.185
2. Intuitive	18.34	3.089	17.14	2.531	1.483	.139
3. Dependent	18.54	3.501	17.26	3.081	1.384	.167
4. Avoidant	12.49	4.164	13.06	3.432	-.521	.603
5. Spontaneous	14.71	3.528	14.80	4.753	-.092	.927

$df = 298$

Table 2 shows mean differences between males and female managers on subscales of GDMSQ. The results indicate no significant mean differences with respect to gender on the subscales of rational ($t = 1.328$, $df = 298$, $p > .05$), intuitive ($t = 1.483$, $df = 298$, $p > .05$), dependant ($t = 1.384$, $df = 298$, $p > .05$), avoidant ($t = -.521$, $df = 298$, $p > .05$), and spontaneous decision making styles ($t = -.092$, $df = 298$, $p > .05$).

Table 3
Comparison among managers with different experiences on sub scales of General Decision Making Style Questionnaire

GDMSQ	1-10 Years ($n = 82$)		11-20 Years ($n = 85$)		Above 21 years ($n = 133$)			
	M	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
Rational	19.48	2.516	20.66	1.997	20.59	2.271	7.527	.001
Intuitive	18.75	2.719	17.50	3.503	18.51	2.905	4.151	.017
Dependent	18.07	3.893	18.98	3.435	18.41	3.238	1.460	.234
Avoidant	13.81	3.750	12.27	3.996	12.27	3.996	6.182	.002
Spontaneous	15.26	4.317	14.55	3.473	14.49	3.135	1.283	.279

Between groups $df = 2$; Within group $df = 297$; Groups total $df = 299$

Table 3 shows the results of One Way Analysis of Variance for the subscales of GDMSQ with respect to year wise job experience. The results indicate significant mean differences in rational ($F = 7.527$, $p < .01$), intuitive ($F = 4.151$, $p < .05$), and avoidant decision making style ($F = 6.182$, $p < .01$). The results show no significant mean differences in dependant ($F = 1.460$, $p > .05$) and spontaneous decision making style ($F = 1.283$, $p > .05$).

Table 4
Comparison among managers belonging to various age groups on sub scales of General Decision Making Style Questionnaire

GDMSQ	Early Adulthood (n = 99)		Middle Adulthood (n = 178)		Late Adulthood (n = 23)			
	M	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
Rational	19.73	2.449	20.63	2.189	20.26	2.320	4.963	.008
Intuitive	18.42	2.926	18.15	3.194	18.80	2.733	.611	.544
Dependent	18.54	3.818	18.55	3.329	17.70	3.253	.629	.534
Avoidant	13.64	4.191	11.98	4.025	12.52	4.128	5.541	.004
Spontaneous	15.38	4.181	14.34	3.289	15.66	2.677	2.653	.072

Between groups $df = 2$; Within group $df = 297$; Groups total $df = 299$
Note: Please read Early Adulthood as 21-39 years age range, Middle Adulthood as 40-54 years age range, and Late Adulthood as 55-60 years age range.

Table 4 shows the results of One Way Analysis of Variance for the subscales of GDMSQ with respect to various age groups including early adulthood, middle adulthood, and late adulthood. The results indicate significant mean differences in rational ($F = 4.963$, $p < .01$) and avoidant decision making style ($F = 5.541$, $p < .01$). The results show no significant mean differences in intuitive ($F = .611$, $p > .05$), spontaneous ($F = 2.653$, $p > .05$) and dependant decision making style ($F = .629$, $p > .05$).

Table 5
Comparison between managers with and without soft skills training on sub scales of General Decision Making Style Questionnaire

GDMSQ	Trained (n = 240)		Untrained (n = 60)			
	M	*SD*	*M*	*SD*	*t*	*p*
Rational	20.41	2.254	19.87	2.528	1.630	.104
Intuitive	18.10	3.050	19.04	3.064	-2.137	.033
Dependent	18.42	3.439	18.71	3.696	-.573	.567
Avoidant	12.37	3.962	13.11	4.723	-1.249	.212
Spontaneous	14.76	3.555	14.53	3.750	.435	.664

$df = 298$

Table 5 shows mean differences between managers with job relevant training and without job relevant training on subscales of General Decision Making Style Questionnaire. The results show significant mean differences on the subscale of intuitive decision making style (t = -2.137, df = 298, p < .05) for trained and untrained managers. No significant mean differences are found on the subscales of rational (t = 1.630, df = 298, p > .05), dependant (t = -.573, df = 298, p > .05), avoidant (t = -1.249, df = 298, p > .05), and spontaneous decision making styles (t = .435, df = 298, p > .05).

Table 6
Comparison among managers having professional (related to management and banking operations) and non-professional education on sub scales of General Decision Making Style Questionnaire

GDMSQ	Professional (n = 144)		Non-Professional (n = 156)			
	M	*SD*	*M*	*SD*	*t*	*p*
Rational	20.34	2.144	20.26	2.473	.303	.762
Intuitive	18.29	3.361	18.28	2.787	.018	.986
Dependent	18.49	3.703	18.46	3.289	.057	.955
Avoidant	12.53	4.192	12.51	4.080	.027	.978
Spontaneous	14.49	3.660	14.92	3.522	-1.026	.306

df = 298

Table 6 shows mean differences between managers with professional and non-professional education on subscales of General Decision Making Style Questionnaire. The results indicate no significant mean differences with respect to education on the subscales of rational (t =.303, df = 298, p > .05), intuitive (t = .018, df = 298, p > .05), dependant (t = .057, df = 298, p > .05), avoidant (t = .027, df = 298, p > .05), and spontaneous decision making style (t = -1.026, df = 298, p > .05).

Table 7
Comparison between managers belonging to public and private sector banks on sub scales of General Decision Making Style Questionnaire

GDMSQ	Public Sector (n = 130)		Private Sector (n = 170)			
	M	*SD*	*M*	*SD*	*t*	*p*
Rational	20.76	1.997	19.95	2.485	3.026	.003
Intuitive	18.00	3.309	18.50	2.867	-1.380	.169
Dependent	18.67	3.367	18.32	3.580	.860	.390
Avoidant	12.23	4.028	12.74	4.201	-1.045	.297
Spontaneous	13.83	3.023	15.39	3.842	-3.799	.000

df = 298

Table 7 shows mean differences between public and private sector bank managers on subscales of GDMSQ. The results portray significant mean differences on the subscale of rational (t = 3.026, df = 298, p < .01) and spontaneous decision making style (t = -3.799, df = 298, p < .001). No significant mean differences are found on the subscales of intuitive (t = -1.380, df = 298, p > .05), dependent (t = .860, df = 298, p > .05), and avoidant decision making style (t = -1.045, df = 298, p > .05).

DISCUSSION

In the present study 1st hypothesis "top managers are more likely to employ intuitive decision making style as compared to middle and lower level managers" was not supported. Contextual factors (task characteristics and problem structure) play a vital role in determining the suitability and effectiveness of intuitive decision making (Klein, 2003). Most of the decisions made by bank managers take place in certain environments where complete information is available, probabilities are known, and outcomes are predictable. Such kind of certainty provides an ideal context to make an effective decision. The only work of the decision maker is to identify the most ideal and the best alternative from the information in hand (Cohen, March, & Olsen, 1972). Such type of environment is suitable for programmed decisions that are successful when sufficient amount of high-quality information is available to make a decision (Davis & Davis, 2003). Dane, Rockman and Pratt (2005) discovered that rational decision making is effective when tasks are highly structured. On the

other hand, the decisional environments filled with uncertainty, change, time-pressure, ambiguity, (Klein, 2003) and ill-structured tasks, are more appropriate for intuitive decision making (Dane, Rockman & Pratt, 2005). This all reflects that domain characteristics play a key role in decision making (Ford & Gioia, 2000).

The 2nd and 3rd hypotheses anticipating that "female managers are more likely to employ intuitive decision making style as compared to male bank managers" and "male bank managers are more likely to adopt rational decision making style as compared to female bank managers" respectively were not supported in the present study. The results of are consistent with the findings of Baiocco et al., (2007) who discovered that no significant gender differences exist with respect to decision making styles on GDMSQ.

The 4th hypothesis "highly experienced managers are more likely to adopt intuitive decision making style as compared to less experienced managers" was supported in the current investigation as highly experienced managers displayed more intuitive decision making styles as compared to relatively less experienced managers. Researchers (Sadler-Smith & Shefy, 2004; Davis & Davis, 2003) suggest that intuitive decision making is based on extensive consultation of prior experience, learned skills, and acquired knowledge.

The 5th hypothesis "older adults are more likely to adopt intuitive decision making style as compared to younger adults" was not supported in this research. The results of current investigation indicate that middle and old-age adults showed more rational decision making style but no significant mean differences existed in intuitive decision making style with respect to various age groups. Several researchers (Baiocco, Laghi & D'Alessio, 2008; Loo, 2000) found that older adults and older adolescents use rational decision making style more then intuitive, avoidant, and spontaneous decision making styles. In the same manner, old and younger adults were found similar in their cognitive process involving risk taking decision making. Both make decision with similar time and speed (Dror, Katona, & Mungur, 1998).

The 6th hypothesis was supported in the present study. Managers with no soft skills training appeared to be more intuitive decision makers than managers having soft skills training. Intuitive decision making is based on perceptions, impressions, and instincts that are natural human tendencies (Scott & Bruce, 1995). Along with social learning, intuitions also share cultural underpinnings

and evolutionary imprints of learning (Gigerenzer, 2003). It shows that human beings are by nature programmed to make use of intuitions in decisional scenarios.

The 7th hypothesis was not supported in this research. No differences were found in decision making style with respect to professional and non-professional education. Educational institutions of Pakistan also need transformation. Most of the degrees are pretty theoretical in nature. In order to overcome such limitations, organizations design special training courses after the selection of the personnel. Brower and Balch (2006) argue that transformational decision making provides a sound and deep-seated skeleton for school leaders to efficiently meet the standards of the new millennium requiring modern thinking, acting and decision making.

The 8th hypothesis was also not supported in the present study. Public sector managers were found more rational decision makers than private sectors managers. Private sector managers were more spontaneous decision makers than private sector managers. Rational decision making is a time consuming process (Spicer, & Sadler-Smith, 2005) which can not be completed in a spur of movement (Scott & Bruce, 1995). These findings are in favor of public sector banks as rational decision making is an ideal style. Timothy (2009) collected data through three sources including observations, interviews, and archival sources and found that public sector decision making is rational in nature.

Conclusion

The current study was aimed to examine the role various individual and organizational factors in decision making styles of bank managers. In general, the hypotheses were supported by the results. Overall, significant mean differences were found in decision making styles of due to their personal and organizational characteristics of the bank managers. Highly experienced managers were more intuitive decision makers as compared to relatively low experienced managers. Young and middle-aged adults were more rational decision makers than older adults. Managers belonging to public sector banks were more rational decision makers in comparison to private sector banks. Finally, implications and limitations were discussed. No significant mean differences in decision making styles were found with respect to management level and gender.

Limitations

The current research was limited to single source information. Only self ratings were obtained from the participant. Managers rated their own decision making styles. It could be more appropriate if the managers were rated by their followers, collogue, and seniors in order to make a comparison between various ratings. Situational, dispositional, and environmental factors contribute a lot in the decision making styles. Similarly, decision making styles vary across the nature of the decisional task. These factors should be investigated in the future research.

Implications

The current research illustrates that aging, experience, training, organizational type plays a vital role in the decision making styles of the managers. These factors should be considered by the organizations are the time of recruitment and selection. The most important findings are regarding the organizational sector. Public sector bank managers preferred rational decision making style—ideal in outcomes—which is quite satisfactory. Attempts should be made by the concerned authorities to keep these trends on track in order to ensure national competitive edge.

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FLAWS IN THE METHODS OF TEACHING MATHEMATICS

Ghulam Mehdi Hayat Khan
Department of Psychology
Govt. Post Graduate College, Jhang

ABSTRACT

The present study was carried out to explore the flaws in the method of teaching mathematics and to explore the teacher's potential of teaching text book of mathematics. A sample of teachers was taken from district Jhang, selected from the given list of teacher obtained from Assistant Education Officer (Kot Shakir, Jhang North). Adapting the technique of systematic random sampling, a sample of 40 teachers out of 150 teachers was selected taking every forth teacher from the list. The age range of teachers was 25 – 50 years. The average age was 35 years. Their average experience was 10 years. An interview schedule was developed for the purpose of identification of problems of learning mathematics from teachers. The items were pre-planned and semi-structured. It consisted of 20 items, in which 4 were close ended while other 16 question were open ended. The teachers were interviewed on twenty questions, regarding the learning problems of children in mathematics. Important points of the teachers' interview were recorded and later on responses of the teachers' interview were categorized, putting similar responses in the same category. Also, to check the teacher's conceptual clarity of the subject they were observed merely while they were solving mathematics problems. Findings revealed that teacher's concepts about worded problems are not clear. Their way of teaching worded problems was sketchy, short and inappropriate. They didn't successfully translate the language concepts in to numerical facts. Their concepts are not very clear about worded mathematics problems as compared to computational solutions of mathematical problems.

INTRODUCTION

We are today on the threshold of information Technology which is affecting every field of human activity and shrinking the globe in to a unified communication system. Science and technology has become integral part of blood stream of modern civilization and is the major driving force for economic growth and development. The power of science and technology has transformed the world and impacted every sphere of man's individual and collective activity, be it economic, political or military.

However, the present educational system has become outdated and outdated having no relevance to the social, political or other problems facing the country. What we want now is not an army clerks and small functionaries to fill our Govt. and business establishments, but a body of useful self relevance balanced citizens, conscious of their heritage and capable of contributing towards the prosperity and glory of our country. Unfortunately, even though several years have elapsed since the independence, our educational authorities seem to have taken little cognizance of the changed conditions.

It is, therefore, essential that the educational system should be reviewed in consonance with the aspirations of the people and the socioeconomic structure of the country. It has long been incumbent upon the community to provide a suitable education for all children. In some countries, such as United States and the United Kingdom, politicians have affirmed this community responsibility through the passage of law such as PL 94-192 and the Education Act respectively. In countries in which the provision of the most appropriate education in more professional obligation then a legal requirement (e.g., Australia) there are, nevertheless, powerful bureaucratic pressures imposed on teachers to accept responsibility for the quality of education.

For decades, education systems have assumed responsibility for innovation in teaching practice. Educational administration may themselves teachers by profession, have seen value in providing extensive in-service programs on many contemporary issues such as curriculum initiatives, policies and practice. Such courses, however, have attended to attract conscientious teachers, rather ten those for whom the content is more vital. Moves by some educational authorities in recent years to link pay increases of certification to additional in-service or university course hours may have encouraged teachers to

attend in-service programmes, but even so there is no guarantee that new ideas and technologies will find their way in to class room practice.

Teaching skills of a teacher are of vital importance in this connection. A number of techniques have been developed to teach the students the different concepts of different sciences. In this reference it must remain clear that teaching of mathematics requires a particular technique and style. The students must grasp the mathematical logic explained by the teachers.

The teacher's training programme in Pakistan is conducted with reference to the general training and there is no specific training for a particular subject. Subsequently, the training of mathematics teacher is inadequate in a sense that there is no specific attention for the teaching of mathematical techniques which, of course, have a vital role especially at primary level education.

METHOD

Sample

The teachers sample was taken from district Jhang, selected from the given list of teacher obtained from Assistant Education Officer (Kot Shakir, Jhang North). Adopting the technique of systematic random sampling, a sample of 40 teachers out of 150 teachers was selected taking every forth teacher from the list. A sample of 37 out of 150 teachers was selected while the remaining three sample units were taken as remaining consecutive numbers. The age range of teachers was 25 – 50 years. The average age was 35 years. Their average experience was 10 years.

Procedure

An interview schedule was developed for the purpose of identification of problems of learning mathematics from teachers. The items were pre-planned and semi-structured. Some of these items were taken from an interview schedule developed and used in a study of psychological interpretation of mathematics learning problems among secondary school students (Israr, 1988). Some of these items were changed, whereas, some new items were also constructed. In this way an interview schedule consisting of 20 semi-structured items, was prepared. The interview schedule contains 4 close ended and 16 open ended questions. Forty randomly selected teachers were individually interviewed. Important points of the teachers' interview were recorded and later on responses of the teachers'

interview were categorized, putting similar responses in the same category. The teachers were interviewed on twenty questions, regarding the learning problems of children in mathematics. Also to check the teacher's conceptual clarity of the subject they were observed merely while they were solving mathematics problems.

RESULTS

Teacher's competence in mathematics were checked by obtaining information that up to what level they studied mathematics or obtained any special training in it either he studied mathematics in secondary school certificate (S.S.C) level (elective mathematics), F.Sc, B.Sc, or not. Then they were individually interviewed for soliciting their views on problems in mathematics. The teacher's responses were recorded on the spot, later the main points were put in different categories. The table 1 given below indicates the levels up to which teachers studied mathematics as a subject.

Table 1
Percentages of Teachers Qualification and special training in mathematics

	S.S.C	F.A/F.Sc	B.A/B.Sc	Special Training
Rural	85	15	0	0
Urban	65	30	4	1
Average	75	22.5	2.0	0.5

Table 1 shows that 75% of the total teachers interviewed, studied elective mathematics as a subject up to the secondary school level. 22.5% teachers studied mathematics up to intermediate level, 2.5% at degree level. None in rural, while only 1% in urban of teachers are participated in any training course in mathematics.

Question 1: What types of material are used by teacher in mathematics classes?

Table 2
Material used for teaching mathematics and their percentage

Material used for teaching	Percentages
Book	100
Black board with chalk and duster	96
Sometime chart	20
Pointer	4
Slate	4
Figure/Picture	2

As shown in table 2 it is evident from table that 100% teachers used text book during teaching. 96% teachers used black board with chalk or duster. Only 20% teachers used chart and 2% used figure/picture. 4% teachers used only slate during teaching mathematics due to short number of children in class i.e. less than 5 children.

Question 2: What types of example are given by teachers while teaching mathematics?

Table 3
Examples given by teachers and their percentage

Examples	Percentage
Example given in book before exercise	65
Example from every day life	25
Example from easy to difficult	10

As table 3 indicate that 65% teachers give textual examples from the book which are given before exercise, 25% teacher used examples from every day life and only 10% used examples of easy to difficult ones. Teachers have no proper way for illustrating because most of the teachers gave examples from the book. No example is used from outside the book.

Question 3: The teachers used extra sources other then prescribed book?

Table 4
Extra Sources used by teachers while teaching mathematics and their percentages

Extra Sources	Percentage
Teaching through book	80
Before starting questions, verbal exercise related to question	15
Charts are used during teaching	5

Table 4 shows that 80% teachers used only book during teaching mathematics, 15% used verbal question method before starting exercise and 5% used chart while teaching mathematics.

Question 4: How the homework of the students is checked?

Table 5
Method used for checking homework and their percentages

Methods	Percentage
Give test of one question daily from the homework	100
Individually check exercise book	90
Checked one student's homework, other students were checked by that student	10

Table 5 shows that 100% teachers take daily test comprising one question only from the homework assignment, 90% check the exercise themselves, 10% teachers checked only one child's homework exercise book and the rest of the copies are checked by the monitor of the class.

Question 5: How those students are treated who do not work properly?

Table 6
Mode of treatment for students who do not work properly and their percentages

Mode of Treatment	Percentage
Again teach wrong question	80
Moral Punishment	25
Inform Parents	20
Class entry not Allowed Till parents come to school	10
Teach wrong question individually on slate	5

Table 6 shows that 80 % of the teachers solve the wrongly done questions by the students on the blackboard. Only 25% teachers give moral punishment and 20% teachers inform the parents. In 10 % cases class entry not allowed till parents come to school. It means in mathematics class most of teacher try to teach difficult concepts again and again till conceptual clarity is obtained by the students. 5% claim to teach the wrong question to each child individually.

Question 6: The types of questions in which according to teachers students shows more interest?

Table 7
The types of questions students shows more interest and their percentage

Types of Questions	Percentage
Least common multiple	90
Highest common factor	85
Addition and subtraction	65
Factorization	30
Brackets	10
Average	10
Multiplication	5
Students feel easy to solve short and simple questions	5

Table 7 shows that according to teacher's opinion the 90% students show more interest in least common multiple questions, 85% students are interested to solve highest common factor and 65% students are interested in subtraction and

multiplication. None of the students are interested in worded-problems, which mean that teachers feel students are not interested in worded problems.

Question 7: During teaching the types of question teachers feel more comfortable?

Table 8
The types of questions Teachers feel more comfortable during teaching and their percentage

Types of Questions	Percentage
Highest common multiple	70
Least common multiple	65
Factorization	40
All syllabus	30
Decimal System	10
Addition and subtraction	5

Table 8 shows that 70% teachers said highest common multiple easy to solve. 65% teachers said they are more comfortable during teaching least common multiple. 40% are agree to say they feel comfortable during teaching factorization. 30% teachers said they feel comfortable during teaching all syllabus.

Question 8: In teacher's opinion the types of questions students feel more difficulty.
Table 9
Types of question students feel more difficulty and their percentage

Types of Questions	Percentage
Geometrical worded problems	95
Arithmetic worded problems	85
Graph	50
Fraction	20
Brackets	10
Decimal system	5

Table 9 shows the responses of teachers indicates some specific problems faced by children. According to teachers 95% children face problems

on geometrical worded problems. 85% teachers pointed out arithmetic worded problems to be difficult for students. 50 % teachers said graph is difficult for students. Fraction and decimal system also posses difficulties for children according to teachers. Teachers think geometry and arithmetic, worded questions are problematic for children of 5th class.

Question 9: In teachers opinion what types of questions are more difficult during teaching mathematics

Table 10
In teacher's opinion difficult question and their percentage

Difficult Questions	Percentage
Geometrical worded problems	85
Arithmetic worded problems	60
Graph	50
Brackets	40
Decimal system	10

Table 10 shows that teachers feel difficulty during teaching mathematics. 85% said that geometrical worded problems are difficult, 60% said arithmetic worded are difficult, 50 % said graphs are difficult and 40% said that we feel difficulty during teaching bracket sums. Worded problems of both types are problematic for students as well as for teachers during teaching mathematics.

Question 10: Methods adopted by teachers with difficult questions which they mention

Table 11
Method used by teachers and their percentage

Teaching methods	Percentage
By writing on blackboard	90
By giving them home work	70
Example from daily life	10
By making them writing on slate	10
By providing good notes	5
By creating their interest in mathematics	5
By questioning them	5

Table 11 shows that 70% teachers gave home work to students and 90% use black board during mathematics class. The low percentages in other categories, throw sufficient light on the teaching practices in the classroom of our primary schools.

Question 11: The method adopted by teachers for the evaluation of children in mathematics

Table 12
Methods used by teachers for evaluation and their percentage

Evaluation methods	Percentage
By sessional test	100
By their home work	90
By verbal questioning	30
By weakly test	20
By observation in class	10
By daily test consist of one question on slate	5

Table 12 shows that teachers use to check the children performance sessional test, home work and verbal questions. 100% teachers used sessional tests as a measure of the pupils abilities, 90% also used to check the pupils ability by giving home work, 30% used to check the children performance by verbal questions and 20% teachers are interested in weekly test.

Question 12: If you are not satisfied with the text book of mathematics, what you propose for its improvement.

Table 13
Suggestion by teachers for mathematics' text-book and their percentage

Teacher's suggestion	Percentage
Mathematics book should be revised in light of the views of teachers.	60
The book of mathematics should be reduced; especially geometrical chapter should be excluded.	50
Worded problem are complicated is should be made easy.	45
Satisfied with present book	10

Table 13 show that 60% teachers believe they should be consulted before making any revision of the text-book of mathematics, 50% teachers suppose that of the geometrical concepts are above the comprehension level of the primary school children, 45% teachers think that the worded problem are beyond the understanding of the children. These questions should be excluded. Only 10% teachers are satisfied with the present text book and syllabus.

Question 13: Do you think that text book of mathematics for class 5 comprises questions?

Table 14
Difficulty level of questions and their percentage

Difficulty level	Percentage
According to the mental ability of children	50
Very difficult	40
Very easy	10

Table 14 shows that 50% teachers said the present book was up to the mental ability of children, 40% teachers said the present book of class 5 was very difficulty. They want some changes in present book. 10% teachers are satisfied with present book and they take it as very easy book.

Question 15: Which of the worded questions are more difficult, Arithmetic or Geometry?

Table 15
Difficult questions and their percentage

Difficult questions	Percentage
Geometrical worded	75
Arithmetical worded	25

Table 15 shows that 75% teachers believe that most of the geometrical worded problems are more difficult, however 25% teachers said that Arithmetical worded problems are difficult.

Question 17: According to your opinion, study of mathematics produce what types of qualities in children?

Table 16
Qualities produce by mathematics in children and their percentage

Qualities	Percentage
Better calculation	50
Reasoning	30
Business thinking improve	10
Useful in every day life	5
Scientific attitude	5
Critical thinking	5

Table 16 shows that 50% teachers think that the knowledge of mathematics can help a child in calculation. 30% teachers gave importance to reasoning. The students can solve problems efficiently as compare to layman. The main benefit of learning mathematics is that they can solve their practical life problems.

Question 18: Generally, how would you evaluate your students in mathematics?

Table 17
Evaluation of students by teachers and their percentage

Evaluation	Percentage
Mediocre	70
Weak	20
Good	10
Very weak	0
Very good	0

Table 17 indicates that according to 70% teachers, students in mathematics are mediocre. 20% teachers said children are weak in mathematics. Only 10% said students in mathematics are good. No extreme response on both sides was observed.

Question 19: Do students marks in mathematics correlate with other subjects or not?

Table 18
Correlation of mathematics with other subjects and their percentages

Correlation with other subjects	Percentage
No relation with other subject	70
Math's relation with Urdu	30
There is correlation	10

Table 18 shows that 70% teachers said that there is no correlation between mathematics and other subjects. 30% teachers said there is correlation between mathematics and Urdu. It means students good in urdu and also good in mathematics. 10% teachers said that there is correlation between mathematics and all other subjects.

Question 20: What sort of steps can be taken for the improvement of mathematics teaching in schools?

Table 19
Steps can be taken for the improvement of mathematics and their percentages

Steps for improvement of mathematic	Percentage
Refresher courses according to change in book	90
Math's trained teacher must be appointed	80
Material should be provided (chart, helping books and kits)	30

Table 19 shows that 90% teachers agree for refresher courses for new change in book. 80% teacher said mathematics trained teacher must be appointed in schools. It means they think training is insufficient at present. They think according to change in book refresher courses must be arranged for the teachers. 30% teachers are not satisfied with material available in schools. They said material (chart, helping books and kit) must be provided for mathematics teaching.

DISCUSSION

It has been hypothesized in our study that teachers' concepts are not very clear about worded mathematical problem as compared to other formats of mathematical problems. This hypothesis is tested and it is observed that teachers' concepts are not very clear. The reasons for this deficiency of teachers' clarity about the worded concepts of mathematics can be given as follows:

a. The information obtained by assistant educational officer show that the academic level of many mathematics teachers is very low. Approximately the 40% of the total sample had gotten third divisions in their secondary school certificate examination. They do not have the required knowledge to guide the students of mathematics properly.
b. The impression is that the selection of teachers in most cases is not fair and according to merit. Some of them are even not eligible for the job of teaching. After conducting interview, it is found that most of the teachers have not teaching acumen.
c. The third reason may be given in terms of teachers training program. Initially the period of training is very short in which many things have to be studied and teachers are not trained specifically to teach mathematics after their training. The interview. Response show that once the training is completed, there is not further program to train the teachers.

Teacher's interviews show that:

(i) Teachers have neither enough material nor appropriate methods for teaching mathematics to the children who are yet not mature to follow the teacher.

(ii) The text-book of mathematics is also not in consonance to the mental level of the children. Moreover, these are least attractive.

(iii) The mathematics syllabus/book needs to be reviewed according to the cognitive level of the children.

(iv) Special training in mathematics must be imparted to the mathematics teachers to sharpen their skills. There must be refresher courses according to change in book.

(v) Worded questions of both types (mathematics worded & geometrical worded) should be excluded from the text-book, because these are generally beyond the level of children of class five. There schemes are not yet developed appreciate such complex concepts.

(vi) Teachers think their qualification in mathematics is not up to the marks, and they need to undergo training and courses in mathematics. In fact they do not understand most of the concepts of mathematics.

During class room observation, it was observed that 10% of the teachers are very weak in subject. Their method of solving the question was not correct. For example, some worded question solved by teachers on black board for the class was badly done and student can not get more than 2 marks out of 10 if he solved same question in the same way in the annual examination.

Of the remaining 30% of the teachers used the correct method in solving the question but they could not properly communicate it to the students. They did not explain the procedures of solving the sums in an orderly manner and proper sequence. As a result the student did not find due interest in the subject. However the balance 60% teachers were at home in their subject. They not only used the correct method, but also had the ability to properly communicate to the children.

It was observed overall expression of 40% teachers was not satisfactory in that students felt confused and unclear in the class of mathematics. They could not comprehend the mathematical explanation of the sums being taught to them. Teachers were not clear concerning the concept of the subject. It was also observed that during the classes of such teachers the students did not feel at ease and remained confused during the period. Students found it very difficult to follow the teachers. For the same reason they did not show any interest in the class work as well as the home work assigned by the teachers. 60% of the teachers showed good performance while expressing concept of the subject. The students appeared to be satisfied with the mathematics work and seemed to enjoy the class work as well as the home work assigned by their teacher. Such teachers were at full command and described every part.

As the results indicate, that difficulty in teaching mathematics as well as grasping the concepts in the said subject by students is mostly attributed to the ignoring of certain cognitive process by teachers and by curriculum setter that are

involved in mathematics learning. Training of teachers also appears to be unmindful of their difficulty. Performance in mathematics can be improved if modern methods of teaching are adopted that are suggested by cognitive and educational psychologist. Moreover psychologist must be integral part of the committee that is responsible for the overview of curriculum, teachers training and monitoring of classroom process.

CONCLUSION

Mathematical teaching is the dynamic process. This is the communication between the teacher and student. Both change during this interaction. The student changes in the sense that he assimilates new concept while the teacher, as he comes to know the limitations of the pupils, changes his strategy of teaching. There are no refresher courses for the teachers even after the change in text of mathematics. So generally the non-familiar concepts in the new text are ignored and worded and conceptual problems are skipped.

Mathematics teachers may adopt new style when they recognize the need for an improvement in their teaching, but an improvement can not be assessed unless the desirable characteristics of good mathematics teaching are known. Following are the recommendations for teaching subject of mathematics, based on the investigation of school council team for mixed ability of mathematics teaching in primary schools (Peter, 1982). The team member lists the following desirable aspects.

Quality

a. Sound mathematical content and variety of tasks.
b. Suitability of tasks for pupil.

Continuity

a. Continuity and development of the mathematical learning of individual pupil.
b. Awareness by the teacher of individual pupil's progress

Autonomy

Development of the pupil's ability to organize his own learning activities

Discussion

Mathematical discussion between pupil and teachers

It was observed that the desirable aspects of good teaching mentioned above are not fulfilled in case of Pakistani school system. Even if some of the aspects are followed, them the others are completely neglected. For example, generally the teachers in our school system are not aware of the individual performance of students in their subjects as well as there is no innovation in their teaching techniques.

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STUDENT' S CAUSAL ATTRIBUTION TOWARDS THEIR SUCCESS AND FAILURE IN EXAMINATION AT POST GRADUATE LEVEL

Sadia Shaukat
University of Education, Lahore

Muhammad Abiodullah
Institute of Education and Research,
University of the Punjab, Lahore

Khalid Rashid
Centre for Educational Research and Assessment,
University of Education, Lahore

ABSTRACT

This study explored the post graduate students' causal internal and external attribution regarding their success and failure in examination. It is based on Heider's attribution theory concerned with how the people attribute their own or others behaviors to certain set of behaving patterns. The purpose of the study was to measure the students' internal and external attribution, how they attributed their success (high marks) and failure (low marks) in examination. A sample of 300 students enrolled in second year at post graduate level was selected randomly from the six disciplines. Two instruments were used to gather the data of high and low achiever students' internal and external causal attribution towards their success and failure in examination. High and low achiever students were identified from each discipline on the basis of their GPA's attained in first year. Results indicated that high and low achiever female students significantly attributed internally and externally towards their success and failure in examination rather than low and high achiever male students.

INTRODUCTION

Heider (1958) was the one to propose the psychological theory of attribution, Weiner and colleagues (e.g., Jones et al., 1972; Weiner, 1974, 1986) made an addition by developing a theoretical framework that served as a major research paradigm for social psychology. Attribution theory has been found to be applicable in education, law, clinical psychology, and the mental health domains. Self concept and achievement are found to be highly correlated. Attribution theory deals with the way individuals describe their experiences of success and failure concerning their interpretations on internal (dispositional) and external (situational) factors (Heider, 1958). "It is the process of identifying the causes of others' behavior, their stable traits, and dispositions" (Baron & Byrne, 2005, p.113). Norcross et al. (1985) stated that "people also attribute their problems to something a focal point, a locus, or a level" (p. 632). Heider's Attribution theory describes the processes of explaining events consequent behaviors and emotional effects of those events. Lewis and Daltroy (1990) discussed applications of attribution theory to health care, and perfectionism (Dunkley, Zuroff, & Blankstein, 2003). Daly (1996) referred to the attributions of employees which they hold towards the failure in receiving promotions.

Similarly Weiner et al. (1971) attribution theory describes how persons' explanation, justification and excuses about themselves influence their motivation. Weiner was one of the psychologists who related the concepts of attribution to education. According to him there are three dimensions of success or failure: locus of control (internal /external), stability (change over time if there is any) controllability (skill one can exercise to control, exclusive of luck). Achievement can be attributed to four aspects: effort, ability, task difficulty level and luck. Ability and task difficulty are stable, whereas effort and luck are unstable; ability and effort are internal where as task difficulty and luck are external attributions. Weiner (1972) stated when individual performs a specific task he/ she may attribute his/her success or failure to internal events (ability or effort) and external events (difficulty of task or luck).

Effort or hardworking are the attributions that people can control completely. Individuals usually describe the causes of their achievement in terms of ability, effort, ease or complexity of task and luck. The first two causes are personal and later two are environmental. Empirical evidence is available that high achiever students attribute their success and failure to effort factor whereas

low achiever students attribute their success to luck and failure to lower ability (Weiner, 1994).

According to Weiner (1994) it is very intricate and complex to attribute for failure or poor marks because of being very complex. Students who attribute their failure to luck might think that their efforts cannot bring about positive change in their results. Students attributing their success to effort may exert more to accomplish the goal and accept challenges in similar situations. In some contexts, when students attribute their high marks in mathematics test to luck cannot count on continued good fortune because difficulty level depends on the whim of teacher. Weiner (1992) described that high achiever students associate their causal attribution of success and failure to effort and ability and low achiever students associate their causal attribution of success and failure to task difficulty and luck.

Those students who attribute their failure to task complexity may likely to blame the teacher. It may be possible when a student attributes failure to lack of ability then he or she may not perform well to achieve the desired targets. These negative thoughts develop pessimist behavior in students toward studies and may less likely to look for help (Ames, 1992). Seligman (1975) stated that students', who learned from their experiences, that effort does not affect outcomes, develop learned helplessness. They did not do any effort. Some students believed that effort will ultimately pay off. Teachers can help these students by rewarding effort, individualizing goal for different learners and making success possible for them. Ames (1992) reported teachers' who emphasized the importance of learning and minimize the importance of grades help students to develop attitude that will overcome the problems of failure.

In the light of literature review the present study was designed to investigate the high achiever and low achiever students' causal attribution towards their success and failure in examination. This study was conducted to explore the answers to the following research questions.

- What are the significant internal attribution causes of high achiever students towards their success?
- What are the significant external attribution causes of high achiever students towards their success?
- What are the significant internal attribution causes of low achiever students towards their failure?

- What are the significant external attribution causes of low achiever students towards their failure?
- What are the common internal and external causal attribution of high and low achiever students towards their success and failure in exam?
- Whether there is a significant difference between high achiever male and female students' internal and external causal attribution on success?
- Whether there is a significant difference between low achiever male and female students' internal and external causal attribution on failure?

METHOD

Sample

Current research was a survey type study. The sample included 300 participants of which 90 were male and 210 were female students of post graduate level. Further breakup was that 63 students were from Chemistry, 39 students from Mathematics, 23 students from Physics, 36 students from Education, 71 students from English and 68 students from the discipline of Urdu. Low and high achiever students were identified from each discipline. There were 31 high achiever and 32 low achiever students from Chemistry, 19 high achiever and 20 low achiever students from Mathematics, 11 high achiever and 12 low achiever from Physics, 21 high achiever and 15 low achiever from Education, 41 high achiever and 30 low achiever from English and 27 high achiever and 41 low achiever students from the disciplines of Urdu respectively. The age groups of students' in percentages were that (87%) were between 20 to 24 years, only 10% students' age were between 25 to 29 years. Distribution of sample is as below.

Table 1
Achievement wise Distribution of Sample (N=300)

	Disciplines					
Gender	**Chemistry**	**Mathematics**	**Physics**	**Education**	**English**	**Urdu**
High Achiever	31	19	11	21	41	27
Low Achiever	32	20	12	15	30	41
Total	63	39	23	36	71	68

Measures

Researchers developed two instruments to measure the students' internal and external causal attribution towards their success (high marks) and failure (low marks) in examination. First instrument "internal and external attribution styles towards success" was developed to measure the students' internal and external causal explanation towards their success in examination. Second instrument "internal and external attribution styles towards failure" was developed to measure the students' internal and external causal attribution towards their failure in examination.

The students' responses were collected on a 5-point Likert scale and converted into a numerical scale. The numerical values assigned to each response are given below:

(Strongly agree = 5, Agree =4, Uncertain=3, Disagree=2, strongly disagree=1)

The frequency distribution of each variable as well as the mean scores and standard deviation were computed, using SPSS software.

Internal and external attribution styles towards success. This instrument was developed to measure the students' internal and external causal attribution towards their success in examination, items were drawn from the studies of Heider (1958); Kelley (1967) and Weiner (1971, 1972, 1992, 1994).

Table 2

Students' internal causal attribution towards their success (high marks) in examination

Items	Factor loading	Item-Total Correlation	Mean	*SD*
I get high marks in examination due to:				
1. Hard work	0.70	0.48	4.28	0.93
2. Taking interest in studies	0.67	0.48	4.31	0.91
3. Having better understanding of this subject	0.68	0.54	4.06	0.78
4. Importance of subject for my future	0.35	0.36	3.70	1.09
5. Memorizing the important concepts of the lesson	0.69	0.44	4.08	0.79
6. Studying with my class fellows for the understanding of different terminologies used in subjects	0.35	0.42	3.58	1.11

7. managing time in an accurate manner while attempting the paper	0.72	0.49	4.10	0.70
8. Writing detailed explanation against questions in paper	0.32	0.38	3.39	1.11
9. Consulting different sources of information like, books, newspaper and websites	0.36	0.44	3.13	1.21
10. Exerting extra efforts for preparing class lectures along with teacher lectures	0.43	0.42	3.69	1.02

A principal component factor analysis followed by an oblique rotation of the factor axes showed three factors with Eigen values greater than unity accounting for 55.71% of the total item variance. Oblique rotations are commonly used in factor analyses as psychological factors often correlated and under these circumstances the orthogonal Varimax solution can lack discrimination (Youngman, 1979: 102; Norusis, 1990: 334). The strongest factor, which took 34.12% of variance, comprised the ten items of table 2.

A ten-item scale constructed from these items has Cronbach's Alpha reliability of 0.77. For students' understanding, dispositional attribution for getting high marks in exams is perceived in terms of managing time properly (item, 7) working hard (item 1), memorizing the important concepts (item 5).

A principal component factor analysis of the scores on the ten items alone confirms the uni-polar nature of the factor, which accounts for a final 34.12% of item variance.

Table 3
Students' external causal attribution towards their high marks in examination

Items	Factor loading	Item-Total Correlation	Mean	*SD*
I got high marks in examination due to:				
1.Paper was easy	0.31	0.36	3.08	1.18
2. Due to teacher's fair checking	0.35	0.33	3.70	1.27
3.Due to teacher's regularity	0.69	0.55	3.90	1.10
4. Teacher taught me in detail about the concepts of the subject.	0.78	0.60	3.85	1.07

5.Teacher used different motivational techniques, like rewards, incentives etc.	0.74	0.59	3.40	1.17
6. Teacher taught me with different methods of teaching like, demonstration and discussion methods	0.78	0.51	3.52	1.10
7.Teacher completed course outline on time	0.79	0.65	3.85	1.03

A principal components factor analysis followed by an oblique rotation of the factor axes showed two factors with Eigen value greater than unity accounting for 60.78% of the total item variance. Oblique rotations are commonly used in factor analyses as psychological factors are often correlated and under these circumstances the orthogonal Varimax solution can lack discrimination (Youngman, 1979; Norusis, 1990). The strongest factor, which took 45.40% of variance, comprised the seven items of table 3.

A seven-item scale constructed from these items has Cronbach's Alpha reliability of 0.78. For students' understanding, situational attribution for getting high marks in exams is perceived in terms of teachers' completed course outline on time (7), teacher's good teaching methodology for understanding the lesson concepts (item 4), teacher's used different methods (item 6).

A principal components factor analysis of the scores on the five items alone confirms the unipolar nature of the factor, which accounts for a final 45.40 % of item variance.

Second instrument

An instrument was developed to measure the students' internal and external causal attribution towards their success in examination, items were drawn from the studies of Heider (1958); Kelley (1967); Weiner (1971, 1972, 1992, 1994).

Table 4
Students' internal causal attribution towards their low marks in exams

Items	Factor loading	Item-Total Correlation	Mean	*SD*
I got low marks in examination due to:				
1. Being mentally upset during the test	0.35	0.26	3.34	1.32
2. Insufficient preparation	0.42	0.37	3.35	1.16
3. Carelessness that I didn't pay attention on the test	0.39	0.40	3.17	1.36
4. Not having enough time for the preparation of test due to my domestics responsibilities	0.47	0.43	3.19	1.26
5. The inability to manage time properly during the paper	0.70	0.36	3.01	1.21
6. Forgetting many important points of lesson	0.70	0.42	3.03	1.31
7. The inability to maintain my concentration on test for a long period of time	0.59	0.36	3.06	1.64

A principal components factor analysis followed by an oblique rotation of the factor axes showed four factors with Eigen values greater than unity accounting for 50.94% of the total item variance. Oblique rotations are commonly used in factor analyses as psychological factors are often correlated and under these circumstances the orthogonal varimax solution can lack discrimination (Youngman, 197; Norusis, 1990). The strongest factor, which took 21.28% of variance, comprised the seven items of table 4

A seven-item scale constructed from these items has Cronbach Alpha reliability of 0.66. For students' understanding, dispositional attribution for getting low marks in exams is perceived in terms of lack of time management (item 5), forgetting important points of lesson (item 6) and lost concentration during test (item 7).

A principal components factor analysis of the scores on the seven items alone confirms the unipolar nature of the factor, which accounts for a final 21.28% of item variance.

Table 5
Students' external causal attribution towards their failure (low marks) in examination

Items	Factor loading	Item-Total Correlation	Mean	SD
I got low marks in exams due to:				
1. Teacher's unfair checking	0.55	0.52	2.48	1.21
2. Teacher's irregularity	0.74	0.57	2.42	1.30
3. Teacher inability to make me understand the important concepts of the course	0.82	0.59	2.92	1.28
4. Teacher's ineffective methodology	0.71	0.55	2.88	1.31
5. Teachers' favoritism	0.55	0.39	2.68	1.33

A principal components factor analysis followed by an oblique rotation of the factor axes showed four factors with Eigen values greater than unity accounting for 62.12% of the total item variance. Oblique rotations are commonly used in factor analyses as psychological factors are often correlated and under these circumstances the orthogonal varimax solution can lack discrimination (Youngman, 1979; Norusis, 1990). The strongest factor, which took 25.73% of variance, comprised the five items of table 5.

A five-item scale constructed from these items has Cronbach Alpha reliability of .72. For students' understanding, situational attribution for getting low marks in exams is perceived in terms of teacher's low motivation for teaching (item 3), teacher's irregularity (item 2) and teacher's ineffective methodology (item 4).

A principal components factor analysis of the scores on the five items alone confirms the unipolar nature of the factor, which accounts for a final 25.73% of item variance.

Procedure for data collection

Data pertaining to 300 students chosen randomly from six disciplines (Chemistry, Mathematics, Physics, Education, English, and Urdu) enrolled in second year at post graduate level were obtained. Intact classes of second year (senior) students from the specified disciplines were selected. In each discipline high and low achiever students were identified from the result of their first year. GPA of two semesters of first year was computed and arranged in a descending

order of score. Students who obtained above 3.0 GPA were taken as high achievers and students who obtained less than 3.0 GPA were declared low achiever. Separate questionnaires were distributed among the high and low achiever students. The high achievers from all the disciplines were provided with the first instrument meant for the students' internal and external causal attribution towards their success in exam and low achiever students the second instrument meant for students' internal and external causal attribution towards their failure in exam. The researchers administered the questionnaires themselves to the students during the third semester of their final degree program. Students were given a full class period, approximately 60 min, to fill in the questionnaires. Demographic information like gender, age and discipline were also drawn from the students.

Procedure for data Analysis

To analyze the high achiever and low achiever students' internal and external causal attribution toward their success and failure descriptive statistics was used. Mean, standard deviation and rank order were used to interpret the students' causal attribution towards their success and failure.

Table 6
High achiever students' internal causal attribution for success (N= 150)

Statements	Mean	*SD*	Ranked Success
1. Working hard	4.28	0.93	2
2. Taking interest in studies	4.31	0.91	1
3. Having better understanding in this subject	4.06	0.77	5
4. Importance of subject for my future	3.70	1.09	6
5.Memorizing the important concepts of the lesson	4.08	0.79	4
6. Studying with my class fellows for the understanding of different terminologies used in subjects.	3.58	1.11	8
7.Managing time in an accurate manner while attempting the paper	4.10	0.79	3
8.Writing detailed explanation against questions in paper	3.39	1.11	9
9. Consulting different sources of information like, books, newspaper and websites.	3.13	1.21	10
10. Exerting extra efforts for preparing class lectures along with teacher lectures.	3.69	1.02	7

The above table shows results regarding high achiever students' internal causal attribution towards their success in examination. Students considered that interest in studies is the key component of their success or high marks in examination. Secondly they believed that their habit of hard working and management of time are the significant elements of their success. Similarly concept memorization and deep understanding of the subject make them confident to get high marks in exams. The importance of the subject in future context is also a substantial aspect of students' toiling habit. Likewise students realized exerting more for the studies along with attending lectures would fetch high marks in exams. They also attributed collaborative learning with the class fellows through discussion on the important terminologies lessen their success in exams. Students' explanation of the cause of getting high marks in exam has been detailed against each question. They gave credit to some resources of general information like newspapers, books and web knowledge as the contributors towards getting high marks in examination.

Table 7
High achiever students' external causal attribution for success (*N*=150)

Statements	Mean	*SD*	Ranked success
1.Paper was easy	3.08	1.18	7
2. Due to teacher's fair checking	3.70	1.27	4
3.Due to teacher's regularity	3.90	1.10	1
4. Teacher taught me in detail about the concepts of the subject.	3.85	1.07	2.5
5.Teacher used different motivational techniques, like rewards, incentive etc.	3.40	1.17	6
6. Teacher taught me with different methods of teaching like, demonstration and discussion methods.	3.52	1.10	5
7.Teacher completed course outline on time	3.85	1.03	2.5

The above table reveals cause's of external attribution of high achiever students' towards their success in examination. Students attributed some external factors in the form of teachers' role in their success in examination; they appreciated teachers' teaching commitments and professional behavior supporting their success. Teachers' regularity in their classes is a significant proof of their high marks in examination. They also gave value to teachers'

dedication in teaching and their extra efforts for making them understand the important concepts of the content and completion of course work on time. Students believed teachers' fair marking system encourage them to do more hard work. Teachers' use of different methods of teaching in classroom like demonstration and discussion for better students' learning is the important element of students' success. Teachers' motivational device like rewards in the form of appreciation in classroom is a chief reinforcement for students. In some cases students believed they get high marks in exams when the questions in paper are not complicated to attempt.

Table 8
Low achiever students' internal causal attribution for failure (N=150)

Statements	Mean	*SD*	Ranked failure
1. Mentally upset during the test	3.24	1.32	2
2. Preparation was insufficient	3.35	1.16	1
3. carelessness that I didn't pay attention on the test	3.167	1.36	4
4. Having not enough time for the preparation of exam due to my domestics responsibilities	3.19	1.26	3
5. Could not manage time properly during the paper	3.01	1.21	7
6. Forgot many important points of lesson	3.03	1.31	6
7. Could not maintain my concentration on test for a long period of time	3.07	1.64	5

The above table reveals causes of internal attribution of low achiever students' regarding their failure in examination. They accepted their low interest in studies or insufficient preparation in studies as the chief cause for getting them low marks in exams. Some students blame their domestic responsibilities for low marks. During exam they did not maintain their concentration on the paper and forgot many important concepts of the content. Time management while attempting the questions of the paper was a major internal attribution cause for their failure or poor marks.

Table 9
Low achiever students' causal external for failure (N=150)

Statements	Mean	SD	Ranked failure
1. Teacher's unfair checking	2.48	1.21	4
2. Teacher's irregularity	2.42	1.30	5
3. Teacher did not make me understand the important concepts of the course	2.92	1.29	1
4. Teacher's methodology was ineffective	2.88	1.31	2
5. Teachers' favoritism I got low marks	2.68	1.34	3

The above table shows the causes of external attribution regarding the low achiever students' for their failure or getting poor marks in examination. Students believe that the ineffective teaching methodology and low motivation of teacher for teaching the students as the major cause of their failure. Some students' assume that teacher favoritism and unfair checking is the strongest reason for their unsatisfied result in examination. Teacher irregularity is also a cause of their poor marks in examination.

Table 10
High and low achiever students' similar internal and external causal attribution of success in examination (N=300)

Statements	High achiever		Low achiever		t value
	M	SD	M	SD	
Paper was easy	3.08	1.18	2.69	1.19	2.82*
Due to teacher's fair checking	3.70	1.27	3.52	1.21	1.25
Took interest in studies	4.31	0.91	3.91	1.23	3.21*
Due to teacher's regularity	3.90	1.10	3.58	1.30	2.9*
Because of having better understanding in this subject	4.06	0.78	3.13	1.29	7.54*
Teacher taught me with different methods of teaching	3.52	1.11	3.12	1.31	2.85*
Memorized the important concepts	4.08	0.79	2.97	1.31	8.89*
Managed time in an accurate manner while attempting the paper	4.11	0.71	2.99	1.21	9.79*

*p< .05, **p < .01

The above table shows results regarding high and low achiever students' attribution towards internal and external causes of success and failure in examination. There was a significant difference in high achiever students' internal causal attribution (M= 3.08, SD= 1.18) on the ease of paper in examination than low achiever students (M= 2.69, SD= 1.19). Teacher fair checking was equally important for high achiever students (M= 3.70, SD=1.27) and low achiever students (M= 3.52, SD= 1.21). Interest in studies was very important internal causal attribution for high achiever students (M=4.31, SD= 0.91) as compared to low achiever students (M=3.91, SD=1.23).Teacher regularity was a chief external causal attribution for success in examination (M=3.90, SD= 1.10) than low achiever students (M= 3.58, SD= 1.30). Subject interest was significantly internal causal attribution for high achiever students (M=4.06, SD= 0.78 comparatively low achiever students (M= 3.13, SD= 1.29). Effect of teacher methodology was an external causal attribution for high achiever students (M= 3.52, SD=1.11) than low achiever students (M= 3.12, SD= 1.31). High achiever students had more internal causal attribution about memorization of the important concepts of the lesson for getting high marks in examination (M= 4.08, SD=0.79) than low achiever students (M= 2.97, SD= 1.31). Time management during paper was a major internal causal attribution for high achiever students (M = 4.11, SD= 0.71) than low achiever students (M= 2.99, SD= 1.21).

Table 11
Comparison of Mean Scores of High achiever Male and Female students' internal and external causal attribution towards success (N=150)

Causal attribution for success	Male (*n*=34)		Female (*n*=116)		*t*-value	*p*-value
	Mean	*SD*	Mean	*SD*		
Internal	36.65	7.85	38.85	4.66	-1.56	.12
External	25.59	4.78	26.40	5.30	-2.775	.00

The above table shows results about high achiever male and female students' internal and external causal attribution towards their success in examination. High achiever female students (M=38.85, SD= 4.66) significantly internally attributed their success in examination than high achiever male students (M= 36.65, SD= 7.85). Similarly high achiever female students (M= 26.40, SD= 5.30) significantly externally attributed their success in examination as compare to high achiever male students (M= 25.59, SD= 4.78).

Table 12
Comparison of Mean Scores of Low achiever Male and Female students' internal and external causal attribution towards failure (N=150)

Causal attribution for failure	Male(*N*=55)		Female(*N*=95)		*t*-value	*p*-value
	Mean	*SD*	Mean	*SD*		
Internal	20.82	5.30	22.79	5.27	-2.202	.02
External	12.56	3.81	13.86	4.72	-1.84	.06

The above table shows results regarding low achiever students' internal and external causal attribution towards their failure in examination. Low achiever female students significantly internally attributed their failure in examination (M= 22.79, SD= 5.27) than low achiever male students (M= 20.82, SD= 5.0). In the same way low achiever female students (M= 13.86, SD= 4.72) significantly externally attributed their failure in examination as compare to low achiever male students (M= 12.56, SD= 3.81).

DISCUSSION

The results of the study showed high and low achiever students' internal and external attribution towards their success and failure in examination. According to high achiever students, interest in studies, hard working for getting good marks in paper, time management during paper, memorization of the important concepts of the lesson, better understanding in the subject, subject importance for future, collaborative studies with peers, detailed written explanation against the questions in examinations as well as reading of related subject books, newspaper in addition to web browsing on related topics are the key elements of their success in examination. These internal causal attributions show high achievers' different ways of hardworking or toiling attitude for getting high marks in examination. High achiever students attributed some external causal attribution for their success or good marks in examination like teacher regularity, teacher professional commitment, teacher methodology and responsibility to complete the course on time, teacher fair checking, and teacher's methodologies using different methods (discussion, demonstration) teacher motivational supporting devices in class encourage the students for studies and thoroughly prepare for the examinations.

Low achiever students attributed some internal causal attributions towards their failure or low marks in exam i.e., insufficient preparation, mental depression before exams, poor time management , careless attitude towards examination, low span of concentration on paper, failure in remembering the concepts & content. They also associated some external causal attribution like, teacher's irresponsible attitude to make students understand the concepts of content, teachers' favoritism, unfair checking and irregularity of teacher.

High and low achiever students' similar internal and external causal attribution information was also taken and it was found that high achiever students mean score on the following factors interest in studies, teacher regularity, better understanding in subject, ease of paper, teacher methodology, memorized concepts of the content and time management were high as compare to low achiever students. High achiever students associated these factors as internal and external causal attribution for their success or good marks in examination.

Moreover, high achiever male and female students' internal and external causal attribution on success indicated that high achiever female students associated internal and external causal attribution with success than male students. Similarly low achiever female students associated internal and external causal attribution to their failure or low marks in examination as compare to male students.

The results of the study provided the clear picture regarding the high and low achiever students' internal and external causal attribution and support the findings of Weiner's theory which describes that high achiever student mostly associated their success to ability and effort and low achiever students associated their low marks or failure to luck or task difficulty. The results of the study support that male students have more internal and external locus of control to attribute their success and failure in examination than female students.

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DIAGNOSTIC MARKERS FOR IDENTIFICATION OF SCHIZOPHRENIA AND BRAIN DAMAGED INDIVIDUALS ON BENDER GESTALT TEST

Muhammad Khalid Ramay
Department of Psychology, Govt. Post Graduate College, Jhang
and
Maher Bano
Department of Psychology, University of Peshawar

ABSTRACT

The objective of the present study is to explore the diagnostic markers on Bender Gestalt Test for the identification of schizophrenia and brain damaged patients. The study explores specific deviation patterns on Bender Gestalt Test protocols of 30. schizophrenic and 30 brain damaged males with age ranges 20-60 years. The sample selected from different hospitals of Lahore. The Bender Gestalt Test was administered and scored through Pascal and Suttall (1951) system. However recorded deviations were scored according to Hutt (1969, 1977) and Bender (1938). 34 deviation patterns were recorded and studied. With the help of t test difference among schizophrenic and brain damaged patients were explored for the 34 deviations. Results reflects significant difference between groups on 13 deviation patterns with higher mean associated with brain damaged individuals, while on 6 deviation patterns with higher mean associated with schizophrenic individuals. For remaining 15 patterns difference remains not significant.

INTRODUCTION

Both Schizophrenia and Brain damage is characterized by cognitive deficits. Their differential diagnosis is crucial, and if not recognized for what they are, can be terminal. Diagnostic tools may range from direct observation of the patients to the administration of a series of tests. For the purpose Bender Gestalt is one of such important tests which can finely discriminate indications of

brain damage to the indications of emotional upsets. Translated into Bender protocols, destruction of the gestalt i.e., separation of the gestalt into separate parts, represents a very severe disturbance in perceptual-motor functions of brain damage. Such fragmentation occurs most frequently in the records of chronic psychotics and brain-damaged individuals (Hutt, 1977).

The major symptoms of organic brain disorders are impairment of orientation, impairment of memory, impairment of other intellectual functions, such as comprehension and production of speech, calculation and general knowledge, impairment of judgment, shallowness of affect, and loss of mental and emotional resilience (Ramay, 1998).

Disorientation, impaired intellectual functioning, and inappropriate affect are also well-recognized symptoms of schizophrenia. To discriminate the organic brain disorders from the psychogenic disorders Bender-Gestalt Test is a good tool and give a definite advantage for clinical assessments (Lownscale, Rogers & McCalls, 1989). As far as deviation pattern (in the reproductions of Bender-Gestalt Test designs) of schizophrenics and brain damage patients are concerned, it would be interesting and informative to know that to what extent the pattern of deviations of schizophrenics and brain damage patients are similar or vary to each other.

Bender-Gestalt protocols of 30 diagnosed epileptics and 30 alcoholic subjects were analyzed quantitatively and qualitatively in India. Results revealed that epileptics were high on Bender's total scores and also significantly deviated on all designs except the 2nd pattern. Comparison clearly indicated that perceptual-motor deficit in epileptics is distinctively very high as compared to alcoholics on Bender-Gestalt (Ravindran, 1995).

Fioravanti (1981) in a multi-factor method of assessing vascular brain damage patients that was based on combination of items designed to evaluate performance on the Bender-Gestalt Test and some sub-scales of the Wechsler-Bellevue Intelligence Scale. Four Groups of subjects were used including normals, transitory ischemic attack patients, multiple infraction dementia patients, and stroke victims Result showed that 82.6% of the cases were correctly classified by two discriminate functions obtained from the variables studied.

Bender-Gestalt Test was administered on 34 Spanish children who were diagnosed as patients suffering from brain lesions. Subjects were matched for age

range (5-12 years) and intelligence range (slight oligophrenia to low normal IQ) to control group. 11 items (e.g. executive, number of errors) on the Bender Maturity Scale discriminated between the two groups. Their findings confirm the usefulness of the Bender Test in the diagnosis of cerebral lesions when used in conjunction with other objective techniques (Cabera & Bernia, 1980)

Considering the importance of Bender Gestalt in identification of problem present study is designed to observe the indication of schizophrenia patients and brain damage patients on this test and to study their difference on identified deviations.

METHOD

Participants

The sample consisted of 30 communicable diagnosed patients of schizophrenia and 30 communicable patients of brain damage, with age 20 to 60 years and with literacy level that they can perform their signature fluently. The sample of these two groups was selected on the basis of diagnosis made by the psychiatrist and neurologist respectively. Only those schizophrenia patients were selected who have no history of organic pathology, and if received any shock treatment, it was terminated at least two weeks before testing. Similarly in brain damaged group only those individuals were selected who have an evidence of brain organic pathology, and not have any history of schizophrenia, and if received any shock treatment, it was terminated at least two weeks before testing. Data was selected from Govt. Hospital for Psychiatric diseases, Lahore; Mayo Hospital Lahore; General Hospital, Lahore; Fountain House, Lahore.

Measures

Bender Gestalt was used as the major instrument compeising 9 Gestalt patterns and a biodata sheet to record important demographic information regarding client was administered. Bender (1938), Pascal-Suttell (1951), and Hutt (1969, 1977) attempted to relate specific deviations on Bender Gestalt Test to clinical diagnostic categories. 34 identified deviation patterns are studied in the present research.

Procedure

Bender-Gestalt Test was administered to the participants individually following the standard testing situations. Patient's average time to complete Bender-Gestalt Test was about twelve minutes; however, some patients took as long as one half hour to copy the drawing. An average of four clinical subjects was tested daily. Subjects were given instruction as suggested by Pascal-Suttell in their local language: "I have here nine simple designs (or figure) which you are to copy, free hand, without sketching on this paper. Each design is on one of these cards which I will show you one at a time". The procedure for the test administration was adopted from Pascal-Suttell. After given the instructions subjects were asked to clarify their questions. They were given design A, but the other cards being held face down. After completion of designs A, the subjects were given design 1 and so on until they had copied all nine designs. Scoring procedure for quantitative analysis was also based upon Pascal-Suttell scoring system. However, the deviations were made regarding the distortion and changes in the Gestalt, which were adopted from Hutt (1969, 1977) and Bender (1938).

RESULTS

Table 1

Difference on the 34 deviation patterns on Bender Gestalt between patients of Schizophrenia and Brain Damage

Deviation Patterns	Schizophrenia		Brain Damage		t
	Mean	SD	Mean	SD	
Wavy line	.43	.50	.76	.43	2.76**
Dot, Dash, Circle	.00	.00	.400	.49	4.40**
Circles	.60	.49	.00	.00	6.60**
No. of dots	.53	.50	.50	.50	0.25
Shape of circles	.16	.37	.67	.48	4.48**
Deviation of slant	.17	.38	.53	.50	3.17**
Asymmetry	.90	.30	.93	.25	0.46
Work over	.20	.40	.57	.50	3.10**
Second attempt	.20	.40	.30	.47	0.89
Point of crossing	.57	.50	.70	.47	1.06
Double line	.30	.47	.20	.40	0.89
Curve rotation	.20	.40	.10	.30	1.08
Design rotation	.77	.43	.40	.50	3.05**
Distortion	.80	.40	.70	.47	0.89
Angle extra	.17	.37	.10	.30	0.75
Angle missing	.43	.50	.80	.40	3.10**

Extension, joint, dot	.17	.38	.33	.48	1.49
Curve not center	.20	.40	.50	.51	2.52*
Tremor	.20	.40	.10	.30	1.08
Dashes	.40	.40	.07	.18	5.85**
No. of column	.53	.50	.50	.50	0.25
Curve extra	.53	.50	.43	.50	0.77
Design mixing	.80	.40	.43	.50	3.10**
Extra seat	.40	.50	.77	.43	3.05**
Overlap	.23	.43	.30	.47	0.58
Relevant size	.70	.47	.50	.51	1.59
No order	.53	.50	.63	.49	0.78
Perseveration	.46	.50	.20	.40	2.25*
Abnormal placement of design A	.53	.50	.83	.38	2.50*
End not joint	.07	.25	.90	.30	11.50**
Overlapping difficulty	.20	.41	.47	.51	2.25*
Fragmentation	.27	.45	.53	.51	2.15*
Retrogression	.40	.49	.13	.35	2.41*
Bizarre reproduction	.47	.51	.20	.41	2.52*

*p<.05, **p<.01

DISCUSSION

Findings reflect the significance of Bender Gestalt Test in the test battery while diagnosing Brain damage and Psychotic patients. Results of the present study are very close to the Pascal and Suttell (1951) description that the Bender protocols of brain damaged are more impaired as compared to psychotics and psychotics obtained a high score as compared to neurotics and neurotic obtained a high score as compared to normals.

Deviations on the Bender are more significant than those of the Rorschach, that the act of writing involves a greater commitment than the act of saying (Pascal and Suttell, 1951). Freud (1933) on the other hand, has characterized this situation as the one in which, the normal individual's, unconscious wishes lead to motor behavior which are inhibited by ego defenses. He points out, however, that when there is pathological enfeeblement of ego defenses or pathological enforcement of unconscious excitation, "forbidden" unconscious impulses and potential motor expression may coexist. Freud further suggests that the coexistence of unconscious impulse and potential motor expression may be true of psychosis.

Present study shows that circles, design rotation, perseveration, design missing, retrogression and bizarre drawings are the deviation patterns, which are reflected in the protocols of schizophrenics with the high means as compared to the brain damaged patients. Explanations of these deviation patterns one by one is interrelating to see in the context of schizophrenics' behavior pattern.

Drawing circles instead of dots in designs 1, 3 and 5 is a deviation pattern of schizophrenics in our study are in line with the Pascal and Suttell (1951) study that psychotics tend to draw circles as substitute for dots similar to the deviations of the children on Bender Gestalt Test.

Hutt (1977) described that the shift in major axis of the drawing even through the stimulus design is in the correct position is indicative of problems in perceptual rotation. Severe perceptual rotation (i.e., 80 or more) suggests that some profound disturbance is present, assuming that the subject has adequate cognitive and general perceptual maturity. It also reflects severe impairment of ego functioning, which is the main characteristic of schizophrenics. Rotation tendency is highly significant among schizophrenics as compared to brain damaged patients included in our sample. It is also reported by (Bender, 1938; Suzuta, 1989). Some brain damage patients are also found to rotate the figures but other types of impairments were also present in test protocols.

Perseveration refers either to the inability to shift from one set to another or the inability to inhibit the inappropriate continuation of a response pattern once it has begun. In the case of schizophrenics, the individual displays interference in inhibitory and excitatory functions. Both psychotics and organics manifest severe perseverative tendencies more frequently than neurotics or normals do. Heroin users frequently show a high degree of perseverative tendencies (Hutt, 1969, 1977). In our sample the deviation pattern of perseveration occurs more frequently among the test protocols of schizophrenics as compared to brain damaged patients.

A significant difference is found in the present study between the two clinical groups of brain damaged and schizophrenics. Schizophrenics tend to reproduce the Bender Gestalt Test designs with design missing. In contrast to Hutt's findings the specific results may be due to small sample of this study. Part of design missing is a severe manifestation of psychopathology and such factors are found only in the records of psychotic or brain damage patients Hutt (1977).

Schizophrenic group with the high mean score on Bender tends to reproduce the Bender Gestalt designs with the characteristics of the retrogression, which refers to the substitution of more primitive gestalten for those presented on the test cards. Retrogression suggests some severe disturbance in ego-integrative functions (Hutt, 1977). The disintegrated ego functioning is a characteristic of schizophrenics.

The integration of gestalt involves many fields of experience including the central problems of the personality. Bizarre drawings are reproduced by the schizophrenics on Bender Gestalt Test. The tendency of bizarre reproductions in a significant high rate as compared to the brain organic patients is found in the sample. While among the normals such tendency was totally absent.

Wavy line, dot-dash-circles, dashes, shape of circles, deviation of slant, work-over, angle missing, curve not centre, extra scat, abnormal placement of design A, ends not joint, overlapping difficulty and fragmentation. In our study these 13 deviation patterns are found to be significantly high among the brain damage patients as compared to schizophrenics Explanation of these deviation patterns one by one is interrelating to see in the context of brain damaged behavior patterns.

Nine year old children can reproduce the Bender Gestalt Test designs without marked deviation from the stimuli. An individual is functioning at a maturational level of nine years with respect to his ability to reproduce the designs, so to speak, we cannot distinguish between his deviations and those of individuals suffering from psychogenic disorders. This fact suggests that damage to the cortex has to be rather severe in its effect on the functioning efficiency of an adult of normal I.Q. before it can be detected by means of performance on the Bender Gestalt Test. It is excessively found among the test protocols of brain damaged patients that they tend to reproduce the test designs similar to the very young children (Pascal-Suttell, 1951).

A typical deviation pattern of Bender Gestalt protocols was explored by Bender (1938) there is a tendency to substitute letters, number, dashes or the patients own initial for parts of the configuration. This typical pattern is also manifested in the present study by producing dashes or dot-dash-circles instead of dots in Bender Gestalt design 1, 3 and 5 by the brain damaged patients. Brain damaged patients more frequently follow this deviation pattern as compared to schizophrenics as well as normals.

The patients with dementia are not interested in the structure of things, in the nature of the parts, in their relation to the whole or in the relation of the whole to the context. He shows a defective power in any active structuralization tending to lead to productions resulting from the adaptation of his receptive experiences to the world of reality.

Brain damaged tend to distort the shape of circles Pascal and Suttell (1951) described such type of deviation in adult Bender Gestalt Protocols as an evidence of brain organicity and this pattern is also approve the cross cultural utility of Bender Gestalt Test through the present study. The brain damaged patients of our sample have also a tendency to deviate the shapes of the circles in their reproductions of Bender Gestalt Test design 2 and the rate of such deviation is significantly high as compared to the schizophrenics as well as normals.

Pascal and Suttell (1951) described the work-over deviation pattern that this has a common tendency in all type of the subjects including normals. A little evidence for work-over is found in the protocols of paranoids. But in the present study the work-over tendency is found in brain damage subjects, which is the unique pattern of Pakistani sample.

Another deviation pattern extra scatter is also found in a unique way among the Pakistani population. The study shows that brain damaged patients tend to put the extra scatter on their reproductions of Bender Gestalt Test design. Such deviation pattern is reported in the test protocols of paranoids (Pascal-Suttell, 1951).

Hutt (1969, 1977) indicated that the paranoid patients frequently revealed abnormal placement of design A. Abnormal placement of design A indicates something about the subject's level of anxiety and his rapport with the world of reality. In the present study brain damage patients reveal a high tendency towards the abnormal placement of design A, which is the unique pattern of Pakistani population.

Brain damaged patients and chronic schizophrenics manifest the tendency of closing difficulty through ends not joined (Bender, 1938). Some sort of damage to the brain is evident among the chronic schizophrenics due to syndrome itself or due to electric convulsive therapy. In the present study this

deviation pattern is reflected in the test protocols of brain damaged patients more frequently as compared to the schizophrenics.

The deviation pattern over-lapping difficulty refers to the specific type of the difficulty in executing the drawings of contiguous (figure A) and over-lapping (figure 7). The most common explanation of this deviation is that of defused brain damage (Hutt, 1977). In the present study brain damaged patients highly tend to manifest the over-lapping difficulty in the reproductions of design A and 7.

Brain damaged patients tend to obtain high score fragmentation by separation of the gestalt into separate parts. This result of our study also supported by the Hutt (1977) studies, which indicated the fragmentation, occurs most frequently in the records of chronic psychotics and brain damage individuals.

Deviation patterns wavy line, deviation of slant and angle missing are also followed by the brain damage patients including in our sample. Pascal and Suttell (1951) described that in the drawings of very young children such deviation patterns are common and the brain damage patients are frequently manifest a cognitive level similar to the very young children. In this sense such deviation patterns can be understand easily among the brain damage patients including in our sample. Among brain damaged patients wavy-line deviation pattern is also reported by Ravindran, (1995).

A number of deviation patterns on Bender Gestalt Test are the common properties of the brain organics and schizophrenics. Due to such similarities differential diagnosis is not easy, based upon the Bender Gestalt Test protocols (Pascal-Suttell, 1951). In the present study 11 deviation patterns (no of dots, seymmetry, double line, extension joint dot, tremor, no of column, curve extra, overlap, relevant size and no order) are found to be failed in the differential diagnosis among the brain damaged and schizophrenic patients. In present study four deviation patterns (second attempt, point of crossing, curve rotation and angle extra) are found as a common deviation patterns among all the individuals included in our sample

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PERCEIVED SOCIAL SUPPORT AND DEPRESSION AMONG POSTNATAL WOMEN IN PAKISTAN

Kausar Ansari, Urooj Sadiq
and
Khawer Bilal Baig
Institute of Clinical Psychology
University of Karachi

ABSTRACT

The Present study examines the predictive relationship of perceived social support with depression among postnatal women. After detailed review of literature it was hypothesized that perceived lack of social support would predict depression in postnatal women. Sample of current study, consisting of 90 married postnatal women, with the age range of 25-40 years, who were assessed within four weeks after delivery. Moreover, all three socioeconomic classes (low, middle and high) were considered. 'Nonsupport' Subscale of Personality Assessment Inventory (PAI; Morey, 1991) and Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987) were administered to assess the variables, of perceived lack of social support and depression among postnatal women, respectively. Linear regression was also calculated to determine the predictive relationship of perceived lack of social support with depression among postnatal women. Analysis revealed highly significant relationship between variables ($F = 11.008$, $df = 1, 88$, $p < .01$).

INTRODUCTION

Depression among postnatal women has become the most common complication of childbirth. Epidemiological studies generally show that 10–15% of women are affected by postnatal depression (Lee, Yip, Chiu, Leung, & Chung, 2001; Chandran, Tharayn, Muliyil, & Abraham, 2002). Similarly, Rahman, Iqbal, and Harrington (2003) reported that about 28% of women living in rural areas in

Pakistan fulfill the ICD- 10 criteria for depressive episode in postnatal period; which suggested that incidence of depressive symptoms is high in postnatal period among Pakistani women.

Clinically postpartum onset of depression (postnatal depression) can be defined as major depression occurring within 4 (DSM-IV–TR, American Psychiatric Association, 2000) to 6 weeks after delivery (ICD-10, World Health Organization, 1992). Besides the diagnostic criteria, according to Cox, and Holden (2005), the term 'postnatal depression' is commonly used to describe a sustained depressive disorder in women following childbirth; the sleep difficulties, reduced self-esteem, somatic symptoms such as headaches and weight loss and difficulty coping with day-to-day tasks. Other symptoms include emotional labiality, feeling inadequate, detachment from the baby, forgetfulness, fatigue, and irritability (Jones & Venis, 2001). In addition, a high percentage of postpartum women report non-clinical levels of depressive symptoms, which may be classified as postpartum depressive symptoms or dysphoria (Horowitz, Damato, Solon, & Von Metzsch, 1996).

A Meta analyses identified several primary risk factors for developing depression among postnatal women and poor social support is one of them (Beck, 2001; O'Hara & Swain, 1996). Hence, perception of the presence of social support certainly enhances the quality of maternal behaviors toward the child care. Presence of perceived familial and communal supportive network (that provide warmth and affection to a postnatal woman in times of trouble and stress); and the instrumental and functional assistance like baby sitting, and to have some mature and valuable suggestions for taking care of baby and oneself, assist women in restoring their physical and emotional health and guard them against depression. Similarly, Eldeleklioglu (2006) found a negative relationship between perceived social support from the friends and family and depression. However depending on the woman's satisfaction with support she is receiving, from family and friends plays a crucial role in healthy coping with dilemmas postnatal period.

To our knowledge, very few studies have investigated the effect perceived lack of social support on depression among postnatal women in developing countries like Pakistan. In this regard present study would be an endeavor to identify the role of significant risk factor in developing postnatal depression. This effort will be helpful in identification and reduction of early psychological morbidity in postnatal women; and would be beneficial for mental

health and medical professionals, (including psychologists, psychiatrists, gynecologists and others), as it would play a vital role in providing awareness regarding the issue of depressive symptoms among postnatal women.

Keeping in view the literature following hypothesis was formulated

- Perceived lack of social support would predict depression in postnatal women.

METHOD

Sample

Sample consisting of 90 married postnatal women, were assessed within four weeks after delivery. The age range of participants was from 25-40 years with the mean age of 28.4 years (SD=3.39), the minimum duration of marriage was two years and minimum qualification was graduation. All three socioeconomic classes (low socioeconomic status = 23, middle socioeconomic status = 35, and higher socioeconomic status = 32; N=90) were included. Those women were selected who had no history of psychological problem and had never been on any kind of psychiatric/ psychological treatment (psychotropic medication / psychotherapy). The selected women also had no history of physical illnesses, for e.g., Cancer, Diabetes, etc. This was further confirmed through a detailed interview based on a semi structured interview form for psychological assessment, with the help of their medical records available in the hospital and through discussion with participants. Moreover, only those women were included in the study whose husbands were available around childbirth (prenatal and postnatal period). Those women were excluded, who had a still born or physically handicapped child and whose children died after delivery (exclusion criteria of present research). The reason for this exclusion was to control the effects of bereavement and other emotional trauma.

Measures

Nonsupport' Subscale of Personality Assessment Inventory (PAI; Morey, 1991)

Nonsupport" subscale of Personality Assessment Inventory (PAI) was used to assess the perceived lack of social support. The Nonsupport (NON) scale provides a measure of perceived lack of social support both in term of the availability and quality of respondent social relationship. It is 8-item scale;

participants rated each item on 4-point rating scale (false not at all true, slightly true, mainly true, very true). Item content addresses the level and nature of interaction with acquaintances, friends, and family members. The scoring of Nonsupport Scale (NON) is such that low scores reflect that respondents have generally supportive relationships with friends and family. Elevated scores are indicative of respondents' perception that they have little or no social support system to help them through significant events in their lives.

Edinburgh Postnatal Depression Scale (EDPS; Cox, Holden, & Sagovsky, 1987)

In the present study depression during prenatal and postnatal period was assessed by Edinburgh Postnatal Depression Scale. It was developed to detect minor as well as major depression. EPDS is a 10-item scale; respondents are required to underline which of the four possible responses is closest to how she has been feeling during the past week. It scored on four point rating scale (from 0-3), in which high scores are indicative of increased severity of the symptom. Total score was obtained by adding the scores of all the items, its cut-off score is 9/10, this cut-off score is particularly useful in research projects, where as, when using EPDS in primary care setting as component of screening programme, 9/10 cut-off may be over inclusive, so the cut- off of 12/13 is often recommended.

Procedure

Sample of present research was recruited from maternity wards of different hospitals including Liaquat National Hospital, South City Hospital, and Aziza Hussaini Hospital. Hospitals were selected on the basis of their location, fee structure, and different fee packages. After getting permission from authorities of these departments, the postnatal women were approached, within four weeks after, through staff i.e., nurses. Before the administration of psychological tests, the researcher established rapport with the participants individually, and the purpose of the study was explained briefly to all the subjects. Confidentiality regarding information and results was assured. Once the rapport was developed with the participants they were interviewed and the examiner filled in the semi-structured interview form for psychological assessment. Additional information was also collected, regarding the variables relevant to the present study (e.g. marriage, preferred gender of child, willingness for child, number of children, and weeks after delivery). Socioeconomic status was carefully determined, by using the information obtained through semi-

structured form for psychological assessment. Moreover, in the present study, the criteria for monthly family income was considered, that was reported by Ansari (2003). According to this criteria socioeconomic status is divided into three levels, i) Low (Household having a monthly income of Rs. 14000 and below), ii) Middle (Household having a monthly income of Rs. 14000 to 30000), and iii) High (Household having a monthly income of Rs. 30000 and above) on the basis of Household income and expenditure survey conducted by the Federal Bureau of Statistics (FBS), Government of Pakistan (2001). The administration of semi structured interview form was followed by the administration of subscale of Personality Assessment Inventory i.e. Nonsupport scale, and after that Edinburgh Postnatal Depression Scale was administered.

Scoring and Statistical Analysis

Subscale of Personality Assessment Inventory (Morey, 1991), i.e. Nonsupport, and Edinburgh Postnatal Depression Scales (Cox, Holden, & Sagovsky, 1987) were scored according to the standard procedures given in the respective manuals. Simple Linear Regression analysis was computed to assess predictive relationship of perceived lack of social support with depression among postnatal women.

Operational Definitions

Perceived Lack of Social Support

This variable is assessed by the subscale of nonsupport which provides a measure of perceived lack of social support tapping both the availability and quality of relationships. It also addressed the level and nature of interaction with acquaintances friends and family members (Morey, 1991).

Postnatal Depression

According to Cox and Holden (2005) the term postnatal depression is characterized by a low, sad mood, lack of interest, anxiety, sleep difficulty, reduced self-esteem, somatic symptoms such as headache and weight loss, and difficulty coping with day-to-day tasks following childbirth (postnatal period). In the current study postnatal period refers to the first four weeks after delivery.

Socioeconomic Status

Lower Socioeconomic Status: (Households having a monthly income of Rs. 14000 and below). This income group is categorized as people spending a very high percentage of their income on food, transport and house rent. Their expenditure on items relating to personal appearance, cleanliness and laundry is minimal. For education, they depend on government-subsidized institutions. ***Middle Socioeconomic Status***: (household having a monthly income of Rs. 14,000 to Rs. 30,000) this group has a lesser amount of expenditure on food and spends more on personal appearance and education as compared to the lower socioeconomic group. ***High Socioeconomic Status:*** (Household having a monthly income of Rs. 30,000and above) this class is categorized with people having high emphasis on personal appearance, education and recreation as compared to the two above mentioned groups.

RESULTS

Table 1
Summary of Linear Regression Analysis for the Predictor (perceived lack of social support) of Depression in Postnatal women

Predictor	*R*	R^2	Adjusted R Square
Perceived Lack of Social Support	.333	.111	.101

Table 2
Analysis of Variance

Step	Model	*SS*	*df*	*Ms*	*F*	*p*
1	Regression	352.416	1	352.416		
	Residual	2817.184	88	32.013	11.008	.001
	Total	3169.600	89			

Table 3
Summary of Coefficients

Steps	Model	Un standardized Coefficients		Standardized Coefficients	*t*	*p*
		B	*SE*	Beta		
1	Constant	6.586	1.087		6.060	.000
	Postnatal Depression	.442	.133	.333	3.318	.001

DISCUSSION

Results of present study strongly signified the association of perceived lack of social support in predicting depression among postnatal women. Analysis revealed that perceived lack of social support explains 11% (Table 1) variance in the scores of postnatal depression ($F = 11.008$, $df = 1, 88$, $p < .01$; Table 2). This finding is consistent with previous researches. Chun and Yue'a (1999) found that lack of all kinds of social support including emotional, instrumental, information, economic and social interaction are equally important contributors of postnatal depression. Lacking or availability of social support is contributory or preventive factor in developing depressive symptoms among postnatal women.

In our culture when a women gets married whole scenario around her gets changed. On one side her interaction with acquaintances decreases (therefore, they might lack opportunities to share her feelings with peer group), she becomes more involved in fulfilling domestic responsibilities, and maintaining equilibrium of relationship with her in-laws and have little opportunity access to other resources of getting help. The situation is more or less similar with their friends, hence in both terms they have no or very limited friends, who can be available for her catharsis and emotional support during postnatal period. Mirza and Jenkins (2004) reported that supportive friends may protect against development of disorders. According to some postnatal women, they cannot share their negative feelings, pessimistic thoughts and emotional upheavals, related to child birth, with their family members as they (women) would be thought as unthankful to Allah (God) at this time of blessing. This does not mean that they don't want the baby but at times they are unable to handle

their emotions. Therefore, they need support from their friends or people going through the same situation. Consequently, if social support is lacking, they feel lonely and isolated that could lead to depression. Loneliness is one of the exacerbating factors of depression around child birth (Mills, Finchilescu & Lea, 1995).

Similarly, availability of social support serves as protective function against the development of depression after childbirth. South Asian cultures, including Pakistan, are typically well structured socially with community and family system regarding postnatal period. The event of childbirth is followed by a ritualistic rest period of 40 days, one example of such ritual is "*Chilla*" that is being practiced much frequently in Pakistan. During this period special dietary plans are made for postnatal women that help her in restoring her physical health. Postnatal women's household responsibilities and child care are taken over by family members and other relatives. Most of the time, at least one or two family members are available to assist the postnatal woman in child care to make her emotionally contented and physically comfortable; as a result she would be able preserve healthy and quality time for infant and for herself as well. Behrndt (1995) found that lack of time to herself increased a mother's vulnerability to postnatal depression.

Women's perception of social support also plays an important role. Women may perceive social support provided by husband's family (in-laws) as negative. They may perceive that social support provided by family increases during prenatal and postnatal period because of the infant not because of them (women). The main focus of support, either practical or in terms of suggestions, is usually related to physical needs of the women including diet, medication, exercise etc and is usually offered to protect the infant's health, whereas, women's emotional and psychological needs are usually disregarded. This lack of emotional support and unavailability of someone around while crying and suffering from emotional setbacks may develop feelings of being abandoned and dejected. Some women who experience such feelings may over generalize the situation and may also perceive genuine support in the same context. This overgeneralization of negative perception of social support may be a strong path way leading towards depressive mood. Bilszta, Tang, Meyer, Milgrom, Ericksen, and Buist (2008) reported, that women's cognitive appraisal of her support is of more importance than the objective reality of how much support she receives.

Childbirth should be considered a major life transition and in present study it is found that perceived social support is potentially influential in determining maternal psychological health following childbirth. Therefore increased evaluation of perception of social support and social conflict around child birth can assist in identification of women who could benefit from group or individual interventions to reduce negative appraisal of support system and to enhance supportive social interactions.

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NEGATIVE EMOTIONAL STATES, MARITAL STATUS AND GENDER: A COMPARATIVE STUDY

Sarwat Jahan Khanam, Qasir Abbas and Fazeela Moghal
Institute of Clinical Psychology
University of Karachi

ABSTRACT

The aim of the present study was to investigate negative emotional states of depression, anxiety and stress in married and unmarried men and women. It was hypothesized that the level of depression, anxiety and stress would be high in unmarried men and women as compared to married men and women. The sample of the study comprised of 137 participants. 82 participants were male (50 married & 32 unmarried) and 55 were female (31 married & 24 unmarried) age ranging from 35 to 50 years. Their socioeconomic status was middle and their minimum educational level was graduation. Depression Anxiety Stress Scales (DASS) (Lovibond & Lovibond, 1995) was administered to measure negative emotional states of depression, anxiety and stress in married and unmarried men and women. Two-Way ANOVA was applied through statistical package for social sciences (SPSS, V-12.0) to test the significance of results. Results reflect Marital Status as a significant determinant for depression [F (1,133) =21.69, p<.001], anxiety [F (1,133) = 24.44, p<.001] and stress [F (1,133) = 12.06, p<.001]. However factor of gender found to be not significant as trivial difference was found among males and females on variable of depression, anxiety and stress. Further, interaction effect of gender and marital status found to play significant role in determining depression and anxiety but not in stress. It was found that unmarried females are the most vulnerable group for all the three negative emotional states.

INTRODUCTION

Marriage is an important tradition that provides various benefits. Considerable research has highlighted the positive consequences of marriage. Married individuals frequently report high quality of life satisfaction, happiness, emotional support, social security, high motivational level etc. On the other hand unmarried individuals tend to experience lack of emotional support, discouragement due to fear of loneliness and emotional distress and condemnation for not being married. These and many such issues may lead to mental health problems in unmarried men and women. Thus marital status is a risk factor for mental disorder in unmarried men and women and a predictor of better mental health for married men and women (Mastekaasa, 1992)

Life stressors increase gradually with the passage of time, especially in lives of single and separated / divorced people. These stressors lead towards negative emotional states which more often than not eventually results in mental illnesses (Gove & Shin, 1989). Depression and anxiety are the most common negative emotional states. If remain unnoticed they may turn into clinical disorders. Depressive and anxiety disorders are considered to be severe psychopathologies in human beings usually caused by life time stressors and dissatisfaction with life. Researches indicate that unmarried individuals are prone to depression (Lee, et al., 2009; Scarinci, et al., 2002 & Patten, et al.,2006) anxiety (Sajjad & Hussain, 2005 & Joung, 1997) and stress (Coombs & Fawzy, 1982) more so than married individuals. Several research findings also revealed that married people have high level of happiness (Cairney, Thorpe, Rietschlin & Avison, 1999; Lee, 1991; Stutzer & Bruno, 2006), self esteem (Mandara, Johnston, Murray & Varner, 2008) and subjective well-being (Lee, Seccombe & Shehan, 1991; Evans & Kelley, 2005; Dush. & Amato, 2005). The relationship between marital status and subjective well-being found to be consistent across cultures (Diener, Gohm, Suh, & Oishi, 2000). However, research findings are inconsistent regarding relationship between gender and marital status. Many of the researches indicate that men benefit more from marriage in terms of well-being while other researches propose that women are the pertinent recipients of mental health benefits from marriage (Simon, 2002). Findings of study conducted by Markides and Farrell (1985) indicated that unmarried females reported to have high level of depression as compared to unmarried males. On the other hand according to Horwitz, White and Howell-White (1996) unmarried females found to have lower rates of substance related problems as compared to unmarried males. A research measuring adjustment of single men and women came to the

conclusion that unmarried men tends to be more maladjusted as compared to their female counterparts (Kraupfer, Clark & Room, 1996).

Keeping in view the implication of marriage in negative emotional states and its mental illnesses, present study is an effort to find out the difference in the level of depression, anxiety and stress among samples of married and unmarried males and females. This will help in determining the significance of this important demographic variable in the development of psychological and emotional problems so that preventive measures could be planned and strategies could be designed to deal with the stressors related to being unmarried. Following hypotheses were formulated:

There would be high level of Depression, Anxiety and Stress in unmarried men and women as compared to married men and women.

METHOD

Sample

The sample of the present study consisted of 137 participants. Participants were selected through a purposive sampling technique from colleges, universities, hospitals, banks and different community areas of Karachi. The sample of the study comprised of 137 participants, 82 participants were male (50 married & 32 unmarried) and 55 were female (31 married & 24 unmarried). Their socioeconomic status was middle and their minimum educational level was graduation.

Measures

Depression Anxiety and Stress Scale (DASS)

DASS is a 42 items scale developed by Lovibond and Lovibond (1995) to measure negative emotional states of depression, anxiety and stress experienced over the past one week. 42 items of DASS comprised of three subscales that are Depression (DASS-D), Anxiety (DASS-A), and Stress (DASS-S), consisting of 14 items each. Each item is scored on a four point severity/ frequency rating scale ranging from 0 (did not apply to me at all over the last week) to 3 (applied to me very much or most of the time over the past week). Scores for the subscales of Depression, Anxiety and Stress are calculated by

summing the scores for the respective items. Scores between 0 to 9, 0 to 7 and 0 to 14 are considered within normal range for depression, anxiety and stress respectively. Scores between 10 to 13 for subscale of depression, 8 to 9 for anxiety and 15 to 18 for stress falls within mild range of severity for the respective negative emotional states. Scores between 14 to 20, 10 to 14 and 19 to 25 for subscales of depression, anxiety and stress respectively are regarded as falling within moderate severity of the respective negative emotional states. In addition a score between 21 to 27 for subscale of depression, 15 to 19 for subscale of anxiety and score falling in between 26 to 33 for the subscale of stress is considered to be severe. While extremely severe levels of relevant subscales of negative emotional states are indicated by scores above 28 for depression, 20 for anxiety and 34 for stress.

Procedure

The participants of the present study were recruited from hospitals, educational institutions and from various community settings through purposive sampling technique. Permission letter to conduct the study was given to the authorities of the educational and commercial institutions. Consent form was given prior to the administration of the scale to individual participants assuring them of confidentiality and informing them about the nature of the study and their right to refuse to participate and withdraw once participated, from the study. The consenting participants were given demographic information sheet to complete. After that Depression Anxiety Stress Scale was administered individually. After data collection scoring was done according to standard procedures given in manual and data was transferred to the excel sheet for statistical analysis.

Statistics

In order to examine the data statistically, SSPS, Vol.12 was used for analysis. Two-Way ANOVA and t-test were computed to analyze the data. Descriptive statistics (mean and standard deviation) were also calculated.

RESULTS

Table 1
Demographic characteristics

Variables	Frequencies		Percentages
Education			
Graduate	74		54.01
Masters	59		43.06
Post masters	4		2.92
Gender			
Male			
Married	50		60.98
Unmarried	32		39.02
Female			
Married	31		56.36
Unmarried	24		43.64
Family structure			
Nuclear	48		35.04
Joint	82		59.85
Not Mentioned	7		5.11
Age	**Mean**	***SD***	
Male	40.19	4.86	
Female	39.69	4.04	

Table 2
Mean differences of marital status and gender on variables of depression, anxiety and stress

Negative Emotional States and Marital Status	*N*	Mean	*SD*
Depression			
Married males	50	13.72	9.79
Married females	31	10.71	6.10
Unmarried males	32	17.13	7.18
Unmarried females	24	22.21	11.65
Anxiety			
Married males	50	13.32	8.78
Married females	31	11.32	6.44
Unmarried males	32	16.44	6.34
Unmarried females	24	22.67	11.07
Stress			
Married males	50	14.52	7.96
Married females	31	14.10	6.55
Unmarried males	32	16.75	5.30
Unmarried females	24	21.04	9.67

Table 3
Two Way Analysis of Variance for Variable of Depression with Gender and Marital Status as independent Variables

Source of Variation	*SS*	*df*	*MS*	*F*	*P*
Gender	15.5	1	34.33	0.42	.518
Marital Status	1491.46	1	1774.47	21.69	.000
Interaction	523.33	1	523.33	6.40	.013
Error	10881.93	133	81.82		
Total	12911.87	136			

Table 4
Two Way Analysis of Variance for Variable of Anxiety with Gender and Marital Status as independent Variables

Source of Variation	*SS*	*df*	*MS*	*F*	*P*
Gender	99.23	1	143.06	2.09	.510
Marital Status	1389.78	1	1670.76	24.44	.000
Interaction	540.66	1	540.66	7.91	.006
Error	9090.86	133	68.35		
Total	11120.53	136			

Table 5
Two Way Analysis of Variance for Variable of Stress with Gender and Marital Status as independent Variables

Source of Variation	*SS*	*df*	*MS*	*F*	*P*
Gender	99.23	1	143.06	2.56	.510
Marital Status	571.88	1	672.49	12.06	.001
Interaction	177.59	1	177.59	3.19	.077
Error	7414.15	133	55.75		
Total	8262.95	136			

DISCUSSION

The examination of table 3, 4 and 5 indicated that unmarried individuals are experiencing negative emotional states of depression, anxiety and stress more so than married individuals. (F= 21.69, P < .05; F=24.44, P < .05 & F= 12.06, P< .05 respectively). Reasons behind unmarried individuals than married individuals being more prone to depression, anxiety and stress may be numerous. One of the most important reasons is the age till which the person is still single. The mean age of our sample is 40years. Age above 20 to 25 is thought to be the age after which the person is expected to get married and settle down in life. This is especially true for our culture in which marriages are thought to be the ultimate goal of life and late marriages or never married status is considered misfortune

and a calamity. Consequently individuals tend to experience enormous pressure from family and relatives to find a partner and get married and is likely to feel isolated, alone and rejected in case of not getting married both by choice or by fate .

Moreover around the same age the individual is more likely to have strong need for intimacy, belongingness and love; the fulfillment of which in one way or another is dependent on marriage. Erikson believed that relating to another person on a deep and personal level is one of the most important developmental phase through which every individual has to pass. According to him it is crucial that a person builds close, devoted relationships with another person; and not being able to form close intimate relationship results in emotional isolation and dejection (Cherry, nd).

Besides companionship and spousal support, parenthood is one of the most alluring benefit that marriage offers. Single hood when on one hand leads to feeling of loneliness and lack of social support it deprives one from the pleasure of bearing offspring, thus likely to lead to negative emotional states.

Results also revealed that unmarried females have high level of depression, anxiety and stress as compared to unmarried males; mean differences between married and unmarried males and females (table1) points towards this trend. Similar findings are indicated through several other researches. For example Simon (2002) reexamined the data on relationship among gender, marital status and mental health and came to the conclusion that researches on gender differences in psychological well-being among the married and unmarried individuals indicate that females report greater distress than males. This is probably due to the fact that females from their girlhood are emphasized on their roles as mothers and wife while males are more emphasized on their roles as bread winners of the family. In this case women from cultures that accentuate traditional role of them, and has strong stance towards marriage i.e. view it as physical and financial security for a women, are likely to face even greater pressure over being single (Gordon, 2003).

Further more, according to Lewis (1994) females who choose to remain single or at least postpone marriage are likely to live under conflicting myths of singlehood namely stigmatization (they are looked down upon by society) and glamorization (they are actively pursuing educational and career opportunities). It

is so because they are themselves find it difficult to resolve the conflict and succumb to mental health problems as a result more often then men.

Present research can be concluded on the note that unmarried individuals are more prone to experience negative emotional states of depression, anxiety and stress. Moreover unmarried females tend to have high levels of depression, anxiety and stress as compared to their male counterparts. The limitation of the present research is its small sample size with age ranging from 35 to 50 and is extracted mainly from middle socioeconomic status. A research incorporating large sample consisting of both older and early adults taken from all the socioeconomic classes will further help to clarify the trends revealed by the present research.

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