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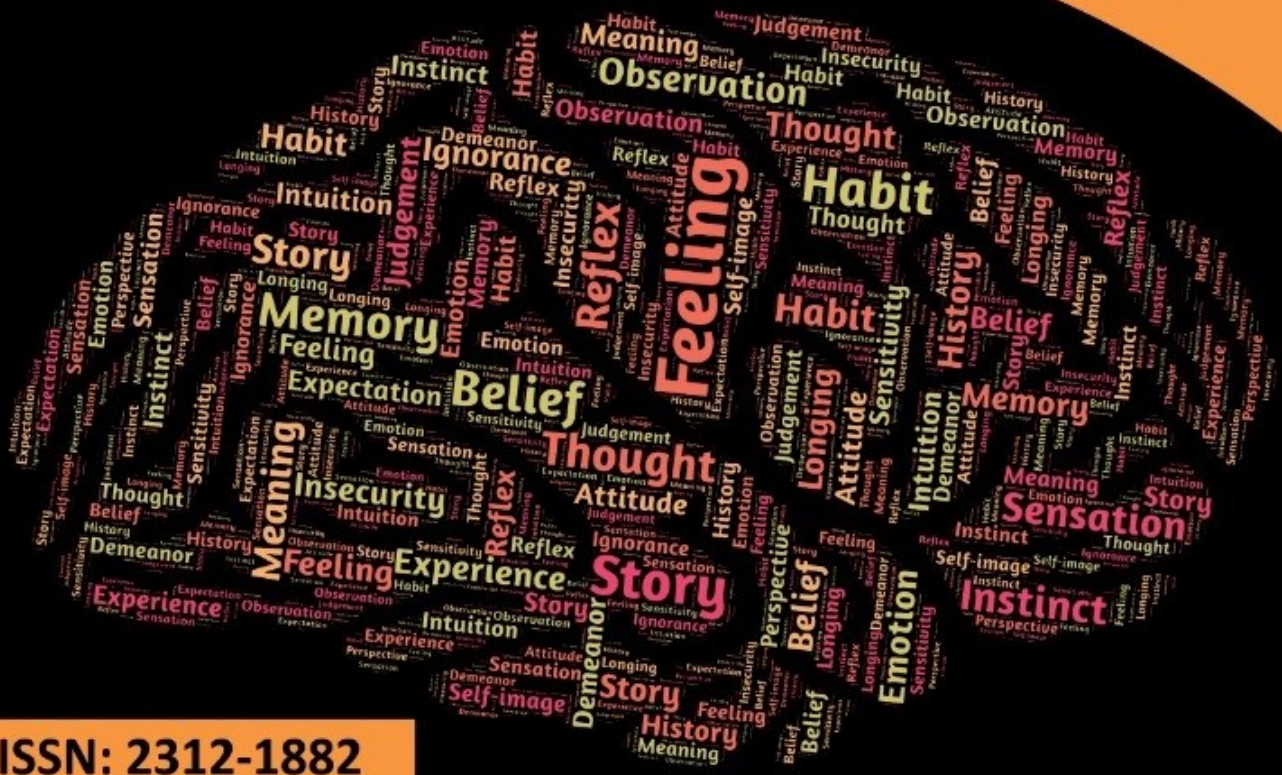

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Working Memory Capacity-Induced Errors in Children's Analogical Reasoning: Implications for Learning Outcome

Stephen Ntim, Mavis Okyere

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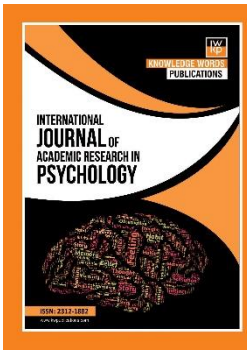
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Working Memory Capacity-Induced Errors in Children's Analogical Reasoning: Implications for Learning Outcome

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Abstract
This study investigated analogical errors made by children aged between 3-4, 5-7 and 9-11 years in analogical reasoning in two administrative regions of Ghana. Analyzing patterns of errors of these children in analogy formation, data in all three age groups, 3-4 years, 5-7 years and 9-11 years suggest children were more likely to make relational errors in analogies that contained more load and distraction than one-relation analogy without distraction- an indication that an additional levels of relational complexity imposes extra mental load making analogical processing more cumbersome for younger children. This finding was interpreted as corroborating what has been established in other studies that the fundamental cause of children's errors in analogy has to do with managing mental load. Children can attend to any analogy provided it is within their knowledge base and working memory capacity and not so much on age per se. Pedagogical implications of working memory resource deficits are drawn for student-centered and constructivist approaches to teaching and learning.
Keywords: Analogical Errors, Working Memory Capacity, Executive Control, Constructivists Learning.

Introduction

The ability to reason analogically is a central feature of human cognition (Gentner & Holyoak, 1997; Hofstadter, 2001). Analogy has been defined as the transfer of a structured set of relations from a base domain to a target from which it is more or less distant. A classic example is the A:B :: C:D analogy (for example, dog: doghouse :: bird? solution 'Nest'. Here the 'lives in' relation must be abstracted). In other words in analogy, a solution to a problem can be used to solve a target problem (Holyoak et al., 1984). Thinking analogically constitutes a critical component in developing children's higher thinking processes because analogy becomes a strategy by which children are taught to make inferences, to extract relevant

information from day-to-day learning experiences based on relational similarity as well as to transfer learning across different domain contexts (Halford, 1993; Holyoak, Junn & Billman, 1984; Chen, Sanchez & Campbell, 1997; Gentner, 1977; Goswami, 2001).

Indeed many empirical studies have been conducted to investigate the changes in the ability of analogical reasoning (Chen, Sanchez, & Campbell, 1997; Gentner, 1988; Goswami & Brown, 1990; Holyoak, Junn, & Billman, 1984; Richland, Morrison, & Holyoak, 2006; Thibaut, French, & Vezneva, 2010a). Data in most of these empirical studies underscore the fact that analogical reasoning can be found as early as in 10 month-old babies (Chen et al., 1997). The core findings in most of these studies devoted to children's analogical reasoning contrast the submission of Piaget and collaborators (1977) that it was it was not until the onset of adolescence that children consistently and successfully completed analogies.

Other researchers as Gentner and others offer a different account of the development of analogical reasoning suggesting that a 'relational shift' occurs in children's analogies through development (Gentner & Toupin, 1986; Gentner, 1988). Due to this shift, children's analogical reasoning changes from being initially based on the surface similarity of object attributes to gradually including relational information between objects and then later on involving systems of relations. In addition, she postulates that analogical competence varies from domain to domain suggesting that the crucial constraint on analogical development is the knowledge that the child has about the relevant relations (Goswami, 1996; Gentner, 1988). Indeed, Goswami and Brown (1989) showed that if sufficiently well-known relations were used 4- and 5-year-olds could complete analogies of the kind Piaget had suggested they would fail.

Thus, children's analogical reasoning capacities improve as their knowledge of the involved relations, or their abilities to resist irrelevant information increase. Several models have been proposed in order to explain these changes which can be categorized into two subclasses: those models explaining the development of analogical reasoning as a result of the increase of children's structured knowledge about the world (Goswami, 1992) and those suggesting that the key to this development is the maturation of control processes such as working memory or executive functions (Halford, Wilson, & Phillips, 1998; Richland et al., 2006).

Some authors characterize analogy-making as a search through a space of features and potential relations. The number of relations holding between any A:B pair is potentially large because, depending on the context, any number of different relations might be relevant (Chalmers, French, & Hofstadter, 1992; French, 1995; Hofstadter, 1995; Mitchell, 1993). The structure of the search space and the presence or absence of competing non-analogical solutions have an effect on the search, especially for young children, who have greater difficulty handling the cognitive load associated with a more elaborate search of the space of possible solutions.

Statement of Problem

One fundamental error in literacy skills exhibited by most Ghanaian children in the primary schools, especially in the area of isomorphic problem solving, mathematical thinking and reading comprehension is that most of these children tend to focus on the superficial features rather than on the underlying relational structural properties between the source and the

target problem. This is especially so among novice problem solvers. While good problem solvers tend to recall accurately structure of source problems, poor problem solvers on the other hand may not even notice the analogous structure in the target problem. Common error among Ghanaian primary school children is the tendency to ignore structural conditions involved in the source or target problems and hence failure to use analogy properly. Most children do not know when and how to make use of the related structural properties, and how this can be of benefit in solving problems. It is essential that in employing analogical reasoning, students (pupils) have the relevant competencies and knowledge about the rules of discourse in the domain whether mathematical or literary comprehension. Poor mathematical reasoning and less skilled reading ability especially inferential comprehension in English continue to be a hurdle for most basic school children in the public basic schools.

For example, in the general resume of the Chief Examiners report for Basic Education Certificate Examination (BECE) for 2005 and 2007 and other subsequent years, poor mathematical reasoning and English comprehension have consistently been identified as the bane of most Ghanaian children (*Chief Examiners' Report*, April 2005, p. 3; *Chief Examiners' Report*, 2007, p. 12) This problem among many primary school children in Ghana notwithstanding, not much (if any) empirical research have been conducted to find out the root cause of analogical reasoning errors as ways to help classroom teachers to enhance effective teaching in problem solving, mathematical reasoning and reading comprehension. This research is meant to fill the gap in the literature on children's errors in analogical reasoning in Ghana.

Research Objectives

Consequent on the above defined problem, the subsequent two objectives that guided this study were:

1) To investigate the underlying pattern of analogical errors of these children through featural distraction.

2) To assess whether or not surface analogical errors are age-related.

Research Questions

The key questions then that this study investigated were:

1) What are the underlying patterns of analogical errors of featural distraction of these children?

2) Are analogical errors of surface similarity age-related or dependent on other factors than age?

Significance of the Study

The findings of this study will help to underscore some of the precursors to conventional literacy that is linked to concept formation in mathematical and literal inferential reasoning for which reason it would be beneficial to basic school teachers. Ability to draw connections between concepts, problems, or representations through analogy thinking is crucial to mathematical proficiency and reading comprehension as well. Consequently, the outcome of this paper will help teachers to understand the psychological underpinnings of children's poor

performance in analogical reasoning and general problem solving. Besides, this study is significant because of the reported crisis of reading and numeracy achievement in most public basic schools in Ghana compared to private schools. For example, Reading achievement levels as measured by the Government-administered Criterion Referenced Test in 2000 indicate that fewer than 10% of the school children at primary level six are able to read with grade level mastery. It is also reported that some parts of Africa, such as Malawi and Zambia, over a third of grade 6 students failed to acquire the most basic literacy skills.

Literature Review

The capacity to think logically and solve problems in new situations is believed to be central to theories of human intelligence often referred to as 'fluid' reasoning (Carrol, 1997; Cattell 1987; Gray et al., 2003; Horn, 1988). Indeed, this ability to think has been identified as leading indicator of changes in crystallized abilities (McArdle, 2001) as well as changes in academic achievement factor especially in quantitative ability, academic knowledge (Ferrer & McArdle, 2004), and reading (Ferrer et al, 2007). One form of this reasoning is relational reasoning: that is, the ability to find correspondences between the structures of distinct mental representations. Analogical reasoning may be considered a specialized form of relational reasoning, one that entails abstracting a higher-order relation between a familiar representation (the base) and mapping it to a novel representation (the target) (Gentner, 1988; Goswami & Brown, 1989).

The most rudimentary form of analogical reasoning is captured by propositional analogy problems (e.g., car is to road as boat is to…?) In these problems, it is necessary to not only abstract the higher-order relationship between the base items (car "moves on" road) but also map this higher-order relationship to the target pair (boat "moves on"?) in order to fill in the missing piece (water).

Piaget argued that, before the stage of formal operations, around age 11, children do not possess the cognitive capacity to represent the necessary relations needed to perform classical analogy problems (Inhelder & Piaget, 1958). When Piaget and his colleagues presented children with pictorial problems of the form 'A:B::C:D' and asked them to find the D term in a pictorial set, he found that children often relied on lower-order relations to solve the problems, choosing items that were associated with or looked like the C item (Piaget et al., 1977). Sternberg and colleagues found similar limitations in young children's analogical reasoning, observing an over-reliance on lower-order relations during analogical problem solving (Sternberg & Downing, 1982; Sternberg & Nigro, 1980).

More recent investigations have revealed, however, that children can effectively reason by analogy at young ages. Children as young as 3 years of age have been found to perform successfully on classical 'A:B :: C:D' analogies as long as they are familiar with the relevant relations necessary to solve the problems (Goswami & Brown, 1989). Numerous other studies have demonstrated children's ability to solve problems through analogical reasoning (Holyoak et al., 1984; Pierce & Gholson, 1994; Richland et al., 2006; Singer-Freeman & Goswami, 2001; Tunteler & Resing, 2002), and prominent analogical theorists have suggested that analogy is an essential means by which cognition develops (Goswami & Brown, 1989).

In the developmental literature, many attempts have been made to study those factors that are likely to explain children's difficulties in solving analogies especially regarding patterns of

errors exhibited by most children. Various views have been offered. One important view is that children's failure to solve analogies especially when they make consistent errors is because they lack the necessary knowledge to understand the relations involved in the analogies. A second hypothesis explains young children's inabilities and consistent errors in analogy by their less developed executive functions. This latter view for example was tested in the study by (Thibaut, French & Vezneva, 2010). These authors manipulated the nature and number of perceptual distractors in an A:B :: C:D paradigm. A number of authors who have studied the developmental mechanisms of analogy-making have also suggested that a gradual progressive improvement of various processing capacities—in particular, an increase ability to cope with cognitive load—is responsible for improved analogy-making skills with age. The recent work of Richland, Morrison and Holyoak are in this area of cognitive processing capacities (Halford, 1993; Richland, Morrison, & Holyoak, 2006)

Executive functions have been invoked to explain the development of analogy making, multifaceted ability. Crucially, analogy making involves selecting the information that is relevant to the analogy and rejecting the information that is not. For example, if A and B are a bird and a nest, respectively, and C is a dog, then D should be a doghouse. Distractors (e.g., bones, a cat), even though they are highly thematically or taxonomically related to C (the dog), must be actively rejected as solutions to the analogy. Halford, Wilson, and Phillips (1998) argued that one fundamental constraint acting on cognitive development is the maximum relational complexity, defined as ''the number of related dimensions or sources of variations" (p. 803) that can be processed in parallel in working memory. This number increases with age. However, this linear trend has been contested (Goswami, 1998; Rattermann & Gentner, 1998). In Halford and colleagues' view, maturational changes in processing capacity represent the major impetus of development.

Richland and colleagues (2006) in a similar way have also argued that children's analogy making of specific abilities is tied to executive functions. This link to executive functions has to do particularly to their ability to integrate multiple relations and to ''inhibit tendencies to respond on the basis of competing superficial similarities" (p. 253). This executive function approach to children's development of analogies contrasts with other views of children's capacities in analogy making. Other authors have emphasized the role of domain knowledge, implying that that increasing knowledge about relations in one conceptual domain will increase analogy making in the target domain (cf. Goswami & Brown, 1990; Vosniadou, 1995). According to Goswami (1992), analogical reasoning is already available during infancy (see Chen, Sanchez, & Campbell, 1997). According to this account it is only the lack of knowledge in the conceptual domains involved that prevents children from deriving the correct analogies.

Gentner (1988); Gentner and Rattermann (1991); and Rattermann and Gentner (1998) suggested that the ''relational shift" occurs in many domains during development even though this shift does not occur at the same time for all domains. It is defined as a shift from early attention to featural similarities to later attention to common relational structures. After the shift, children will primarily succeed in analogical reasoning tasks because they are able to reason on the basis of relational features. Even though the distinction between attributes and relations is far from clear and, at the very least, is highly context dependent (Chalmers, French, & Hofstadter, 1992; French, 1995; Mitchell & Hofstadter, 1990)

Present Study

In this study, we investigated some errors made by children aged between 3-4, 5-7 and 9-11 years in analogical reasoning specifically of the propositional type A:B::C:? for example, LAWYER: CLIENT::DOCTOR:? with some distractions. The specific research questions were: a) What are the underlying patterns of analogical errors of featural distraction of these children?

b) Are analogical errors of surface similarity age-related or dependent on other factors than age? Our expectation is that answers to these two questions will help to provide some psychological insights into the causes behind the errors that many children make in problem solving strategies. Such knowledge will help teachers to anticipate children's/pupils/students errors bearing in mind the root cause of such misconceptions so that they can either pre-empt these in instruction or include questions that might surface in such errors in assessment for learning.

Research Methodology

Sample

This study used the purposive experimental sampling design from an estimated one hundred and sixty (160) children between the ages of 3-11 randomly chosen from four kindergarten and four (4) primary schools in two out of the ten (10) administrative regions of Ghana: Ashanti: eighty (80) children from two (2) kindergarten and two (2) primary schools in the Kumasi Metropolis and Nkawie districts and in the Brong Ahafo region: eighty (80)) from another two

(2) kindergartens and two primary schools from Berekum and the Sunyani Municipalities. The various age groups were in the following categories: 3-4 year olds were sixty (60), 5-8 year olds, seventy (70) and 9-11 year olds, thirty (30). In a data not tabled here an estimated 50% of the sample was male and the rest were females.

Materials and Design

The materials for this task were the A:B: : C: ?. Participants were presented with saw, two or three analogues of a source and target of the A:B::C: ? for them to figure out the relations between them. In this experiment the number of 9-11 years was intentionally reduced to about half of the 3-4 years and 5-8 years since our interest principally was to find out the causes of analogical errors of these much younger children especially in the area of errors of surface similarity which is perceived to be typical of little children. Again we wanted also to know whether these little children had relational knowledge of the 16 relations used in the analogies with distractors and could avoid making surface errors.

Experiment

In this experiment, we used list stimuli to build analogies. The purpose of this experiment was to test our two research questions: a) what are the underlying patterns of analogical errors of featural distraction of these selected children? and b) Are analogical errors of surface similarity age-related?

Experimental Task and Control

Participants saw 16 sets of analogies in which the level of relational complexity and the presence or absence of a featural distractor were manipulated. Each participant saw five analogy sets in each condition: one relation/distractor, one relation/ no distractor, two

relations/distractor, and two relations/no distractor. The content of the analogy sets was counterbalanced across four versions in this Experiment.

Ensuring Relational Knowledge of Younger Children

To make sure that the younger children (3- and 4-year-olds) knew the relations and the relational words used to describe the source relations in the 16 analogies used in this Experiment, they were asked to identify a relation and were asked which of the two analogies given showed that relation. So a task was constructed to require these children to choose between two analogy alternatives. Two analogies were aligned on each page with a relation written above them. The relation was read by the experimenter to the children. A total of 16 pairs were constructed so that each participant made judgments about all 16 relations. The placement of the correct analogy was varied randomly between the left and right sides. The one hundred and sixty participants (160) were exposed to initial explanation of relational knowledge.

A	B	C	D (Target)	Semantic Distractor	Relation
Practice trials					
Wolf	Meat	Goat	Grass	Horns	*Eat*
Child	Foot	Elephant	Paw	Giraffe	*Part of*

Figure 1

On the test problems (presented randomly) the experimenter verbally explained the relevant relation between the source and the target. For example, the experimenter described the agent engaged in the relevant relation in the source: wolf (agent): meat (object) so goat (agent):? explaining that the relation between the analogy is 'eat' with a semantic distractor of 'horns' Similar explanation was given in the second set of analogies where the experimenter explained the relation between A:B and C:D as 'part of' so what is like when given a ternary analogy as Child: foot: elephant:?

Further explanation was given to children as follows: 'sometimes what is happening will have two parts, like the wolf and meat, and sometimes there will be three parts just like child: foot: elephant? Even though they look different (experimenter pointed to each) but try in each case to
figure out what is 'common' or 'the same' or 'is like' in spite of the differences. The researcher repeated the instruction if necessary, to ensure the child understands the task.

Results

Table 1: Mean Scores of Number of Errors Made by the Different Age Groups

		N	Mean	Std. Deviation
Number of surface/featural Errors	3-4	60	3.52	3.447
	5-7	70	1.31	1.389
	9-11	30	.37	.615
	Total	160	1.96	2.625
Number of relational errors	3-4	60	4.22	3.294
	5-7	70	2.39	1.600
	9-11	30	1.20	1.126
	Total	160	2.85	2.585

The over-all results for the three groups on surface errors and relational errors as in Table 1, shows that number of errors made was age dependent. The results show that the younger group of children 3-4 year olds had the largest number of errors in both featural and relational errors. Their mean score on the errors were (M=3.52, SD =3.447) and (M=4.22, SD=3.294) respectively for surface/featural errors and relational error. The older group, 9-11 year olds had mean score of (M=0.37, SD=0.615) and (M=1.2, SD=1.126) respectively for surface/featural and relational errors an indication that they had the least number of errors. To test whether these differences in the mean scores of the number of errors made by the different age groups were statistically significant, one–way analysis of variance (ANOVA) was used and the result is presented in Table 2

Table 2: ANOVA Test on the Surface/Featural and Relational Errors for the Three Age Groups

		Sum of Squares	Df	Mean Square	F	Sig.
Number of surface/featural Errors	Between Groups	250.739	2	125.370	23.293	.000
	Within	845.036	157	5.382		
	Total	1095.775	159			
Number of relational errors	Between Groups	208.831	2	104.415	19.206	.000
	Within	853.569	157	5.437		
	Total	1062.400	159			

The ANOVA test revealed that significant differences exist between the different age groups in terms of the number surface/featural errors and relational errors made. To find out the age groups which differ on the two variables a post-hoc test was conducted. The test on equality of variance as shown in Table 3 shows that there are statistically significant differences in variances of the three age groups on the two variables.

Table 3: Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Number of surface/featural Errors	62.171	2	157	.000
Number of relational errors	26.409	2	157	.000

That the variances of the age groups on surface and relational errors were significantly different. The Game-Howell's Pos Hoc test was therefore used to find the differences in the mean errors of the three age groups on the two variables. The result is shown in table 4.
The result of the Pos-Hoc test shows that the younger age group 3-4 year olds had mean scores greater than the two other groups on the two variables. On surface/featural errors the mean differences between this year group and the 5-7 and 9-11years were 2.202 and 3.150 respectively. Also, on the relational error variable the mean difference between the year groups were respectively 1.831 and 3.017.

Table 4: Comparisons of the three age groups on the two variables

Dependent Variable	(I) age of participant	(J) age of participant	Mean Difference (I-J)	Std. Error	Sig.
Number of surface/featural Errors	3-4	5-7	2.202*	.475	.000
	3-4	9-11	3.150*	.459	.000
	5-7	9-11	.948*	.200	.000
Number of relational errors	3-4	5-7	1.831*	.466	.001
3-4		9-11	3.017*	.472	.000
5-7		9-11	1.186*	.281	.000

The mean difference is significant at the 0.05 level.

Discussion

Results of this experiment are consistent with other research studies in the following three areas: a) effect of age as a factor on participants' error responses; b) there was main effect of relational complexity and distraction on children's error and c) data supporting other studies that besides age, there are other factors that explain the causes of children's analogical errors and set limits to their analogical reasoning: for example, relational complexity and distraction can increase mental load especially for much younger children, if the target and the base analogues are not within their knowledge base. Thus, as per the data of this experiment, the effect of age in relation to accuracy of responses in analogical reasoning is still paramount.

This is evident when we run the Games-Howell multiple comparisons between the different age groups. However, there is no suggestion from this experiment that this age factor variable per se is independent. The measure that examined the pattern of errors seems to suggest that the age factor is almost always related to relational complexity: the longer the analogy (in terms of length), the less likely it was for younger ones to have accurate responses and

the shorter the analogy, the better the responses of these younger children. Thus younger children seem to have challenges with mental load when they simultaneously have to process longer analogies and distractions and these challenges seem to precipitate the consistent pattern of errors as this experiment revealed. Thus, younger children's performance was impaired and more errors made when surface/featural competitions were added. Most errors were on the surface match with a ternary relation and distractions rather than simply with surface matches with the A or B term. Again this finding is consistent with other recent studies such as Thibaut, French and Vezneva (2010). When these authors asked younger children to justify the reasons for the choices they made (mostly the erroneous ones), the answers they gave could not be taken as justifying analogical reasoning.

The pattern of analogical errors as per the findings of this study is underscored mostly by distractions and the length of the analogy whether it is binary or ternary. This means that when the processing load of analogies is within the scope, mental capability as well as the understanding of children, they can conveniently see the link between base analogue and target analogue. This surface/featural errors support the submission of Goswami and Brown (1989), Goswami (1992, 2001) and Goswami, Leevers, and Wheelright (1998). These authors in proposing the relational primacy hypothesis make the claim that that analogical reasoning is fundamentally available as a capacity from early infancy. However, children's analogical performance increases with age due to what these authors refer to as 'accretion of knowledge about relevant relations.

What these data seem to suggest is that the number one underlying causes of children's analogical errors has to do with a continuum of executive control especially in children's searching the solution space of analogical problem. For much younger children, there appears to be a lack of control. In this lack of control, the lack of inhibition appears to play a very significant but certainly not an exclusive role since the age-related factor is still crucial (cf. Thibaut, French & Vezneva, 2010). Thus greater executive function skills both composite and inhibitory control as well as vocabulary knowledge are all predicting factors that explain whether or not children can succeed in analogical reasoning. In other words, knowledge is a prerequisite in analogy performance, this notwithstanding, a strong executive-functioning resources at early childhood and basic school are related to long-term gains in fundamental reasoning skills (Lindsey & Burchinal, 2012).

Besides, the findings of this study as indicated in the patterns of errors showed that when children across the three age groups responded on the basis of relational correspondences, there was competition with tendencies to respond more on the basis of superficial surface or semantic similarities between individual objects. This suggests the need for inhibitory control in working memory when relational and more superficial responses conflict, giving support to studies that see inhibitory control as a factor in the development of analogical reasoning in children (Gentner & Toupin, 1986; Morrison et al., 2004; Viskontas et al., 2004).

Educational Implications of Findings for Learning Outcome

There are three key findings in this research: a) First the effect of age on children's pattern of errors is still critical, especially for much younger children, b) the main effect of relational complexity and distraction on children's errors and c) other factors than age such as cognitive load especially when there is divergence or structural differences between base analogue and

target analogue. These findings reinforce those studies that aim at predicting learning outcomes by considering the capabilities and limitations of the human cognitive architecture. For example, Cognitive Load Theory (CLT), put forward by Sweller in 1988, maintains that cognitive load should be controlled so that meaningful learning can occur in the interactions of all elements. As working memory is limited in capacity (Miller, 1956) and duration (Peterson & Peterson, 1959), all instructional material imposes a working memory or cognitive load, and that cognitive load can be divided into extraneous cognitive load, intrinsic cognitive load, and germane cognitive load.

The first assumption of the cognitive load, which is a main assumption for many cognitive theories summarizes that human working memory, the cognitive subsystem for processing current information, is limited in its capacity for processing. The second assumption it offers is that meaningful learning requires active processing of information by the learner. Active processing in turn requires cognitive processes such as children focusing the attention on the relevant learning content (selection), mentally organizing information in a coherent way (organization) and integrating new information with existing knowledge (integration). So for example in the typical propositional analogies as presented in this study there were three principles of cognition: *apprehension of experience, education of relations* and *education of correlates.* How can we understand these three principles of cognition? Consider the analogy A:B :: C:? for example, LAWYER: CLIENT::DOCTOR:? *Apprehension of experience* refers to children encoding (perceiving and understanding *each* of the given terms of the analogy. *Education of relations* refers to the inference between the first two analogies LAWYER and CLIENT. *Education of correlates* is the application of inference by children to a new domain here inferring lawyer to a client and doctor to a patient.

By all accounts then, learning cognitively speaking is a complex task that requires a student to use and apply a range of cognitive skills. A student's ability to retain information while performing concurrent processing, often referred to as working memory (WM), is critical to the acquisition of increasingly more complex knowledge and skills as evidenced from this study. Distraction and more complex analogies became difficult for younger children in this study and their consistent errors indicated some constraint on the working memory and attention. It is in this context that cognitive approaches to learning often link Working Memory resources to successful learning and student academic achievement. Consequently, there is an inextricable link between student learning and the cognitive processes required to acquire new knowledge with a specific focus on WM and attention. It is in this context that the constructivist view effective learning as coming from the students: students must construct knowledge in their own minds and must individually discover and transform complex information, checking new information against old rules and revising rules when they are no longer working.

In short, as corroborated in this experimental study, children's ability to master the content of the task (analogies) assigned them largely depended on their ability to successfully process information in WM. While, some children were able to do so successfully, others were not because information that they were trying to process overloads their WM and when this takes place learning and understanding are negatively affected. For example, attention is also linked to the WM. It is significantly related to and influences WM particularly when children in this study were asked to encode information in the source and make relations between

source analogue and target and provide the answer. They were distracted especially in the ternary analogies. There are many factors that control attention: motivation, anxiety, fatigue, fear of giving the wrong answer etc. Results of several recent studies show that attention significantly influences WM, particularly when students must encode information (e.g., when a student is listening to a lesson on various cloud formations). Attention controls the amount of time a student needs to maintain information in WM, especially in visual WM. If, for any reason, a students' attention is disturbed, his or her opportunity to learn is diminished. Furthermore, if a student cannot control his attention, interfering information will not be filtered out and learning will also be adversely affected. In sum, the inability to regulate attention is directly related to student academic performance.

This argument of the importance of WMC (working memory capacity) ties in with one of the fundamental key concepts that underlie the constructivists approach to learning, namely, the zone of proximal development which goes back to Vygostky (1978) that children work within their zone of proximal development when they are engaged in tasks they could not do alone but can do with the assistance of peers or adults. For example, when younger children were asked in this study to justify their reasons for their analogical errors, they could not provide any tangible reasons. It is in this respect that there is the need for children to get cognitive apprenticeship, a process by which a learner gradually acquires expertise through interaction with an expert. This leads to *mediated learning*: an approach in which the teacher guides students by means of *scaffolding* (teacher providing more gradual structure and then gradually turns the responsibility over to students.

Based on the findings of this study then, it is crucial especially when teaching at the basic level of education to help learners maximize their working memory resources (Clark et al. 2003; Xiaoning, 2014). Many researches employ various mechanisms of maximizing leaners to manage working memory resources to enhance learning. For example, Lee et al (2006) holds employing graphs, Kester et al. (2006) proposes constructing just-in-time model to present information. Mayer & Moreno (2002) suggests adopting multi presentation effect, congruity effect, coherence effect and redundancy effect in the multimedia instructional design. Clark et al (2003) make the submission that multi-presentation effect, dual-code effect, split-attention effect, modality effect, redundancy effect, animations and element interactivity may reduce extraneous load. As for reducing intrinsic load, Gerets et al. (2004) follows partial-whole order while Van Merrienboer (2002) presents teaching information by simplifying modules of tasks and steps. Lee et al. (2006), Moreno and Valdez (2005) emphasize the need to display complex information by segmentation and Renkl (2004) proposes the use of fading solutions steps to present incomplete examples. Lee et al. (2006) holds that when the complexity of knowledge lowers, lowering extraneous load and increasing germane load merely works for learners with lower prior knowledge. The more complex the knowledge, the richer prior knowledge the learner has contributed to form a new schema and thus lowering the intrinsic load. In terms of increasing germane load, Paas et al (1994); Sweller (1998) provide working examples, and Moreno and Mayer (2000, 2004) promote individual learning, Seufert and Brinken (2006), Moreno and Mayer (2007) see the need to conduct guidance teaching, Moreno and Mayer (2005); Hattie and Timperley (2007) organize feedback teaching, Moreno and Mayer (2007); Moreno and Valdez (2005) undertake reflection teaching. All these efforts have gained remarkable achievements in managing WMC overloads.

Recent research in learning disability has also underscored Working memory to be a strong predictor of both mathematical (Toll, Van der Ven, Kroesbergen, & Van Luit, 2011) and reading difficulties (Horowitz-Kraus, 2014), and therefore it is considered to be the requisite basis for pedagogical intervention to enhance performance. The development of the working memory system underlies performance in both math and reading (Jerman, Reynolds, & Swanson, 2012). Researchers have found differences between individuals with and without math difficulties in spatial aspects of working memory (Mammarella, Lucangeli, & Cornoldi, 2010; Passolunghi & Mammarella, 2012), as well as between individuals with and without reading difficulties in the efficiency of encoding and rehearsal mechanisms (Oyler, Obrzut, & Asbjornsen, 2012) – both of which involve the working memory system. Given the problems that individuals with LDs often experience with the working memory system (Hallahan, Pullen, & Ward, 2013), it is important for educators to plan and implement lessons that reduce the germane and extraneous load (De Weerdt, Desoete, & Roeyers, 2012).

When it comes to interventions aimed at improving working memory (and reducing the cognitive load) for individuals with LDs, there are a few main approaches that are used. Researchers have focussed on the explicit teaching of strategies that individuals can use to reduce the germane load of tasks, and therefore reduce the load on working memory. Other research has been conducted that examines the capacity of working memory, and the potential for this system to be improved or "trained" (e.g., Melby-Lervag & Hulme, 2013). Finally, there are accommodations that educators can make for students with LDs that reduce the extraneous load in tasks at school. Again the findings from this study confirm other empirical research in educational technology and development that highlights the link between germane cognitive load and learning performance. Metaphorical interface in a web-based study enhanced learners' germane cognitive load and learning performance more than it was for non- metaphorical interface (cf. Cheon & Crane, 2012). In other words, the more information was encapsulated in schema-based or metaphorical format, the less the constraints on learners executive functions. This implies that in most cases children are more likely to make errors in analogical reasoning, the more complex the load.

Conclusion

The two research questions that guided this paper were: a) What are the underlying patterns of analogical errors of featural distraction of these children? and b)Are analogical errors of surface similarity age-related or dependent on other factors than age? In the analysis of the pattern of errors of these children in analogy formation, the data suggest that in all the three age groups, 3-4 years, 5-7 years and 9-11 years, children were more likely to make relational errors with two-relation analogy with distractors than one-relation analogy without distraction- an indication that an additional levels of relational complexity imposes an extra mental load making analogical processing more cumbersome, especially for much younger children. These findings provide support for the relational primacy hypothesis that in analogical reasoning, children have the capability to attend to and make mapping relations. However, they are less likely to overcome misleading object surface similarity and are also less likely to maintain relational structure especially when an additional level of complexity is imposed.

The implication here as per the findings of this paper is that the root cause of many children's analogical errors is not simply age-specific, but also executive controls as well as inhibitory factors do combine with age to constrain analogical reasoning giving some weight to the

additvity hypothesis theory of cognitive load (Pass et al, 2003). The instructional implication here is that to make teaching more efficient and learning more enhanced, instructional load (also called germane load) as much as possible need to be made less loaded for most children. This is especially so in problem solving, mathematical reasoning and reading comprehension during the early stages of learning. Prerequisite knowledge (generally referred to by Ghanaian basic school teachers as 'RPK'- relevant previous knowledge) or domain specific knowledge alone is not sufficient to enhance children's problem solving skills. For example, analogies can be used to make learning relevant and activate prior knowledge. Like advance organizers, the use of explanatory analogies can contribute to an understanding of lessons or text. They help students learn new information by relating it to concepts they already know. However it is also important that analogies are thoroughly familiar to learners than they relate in any direct way to the concepts being taught since poor use of analogies can rather inhibit learning.

One significant finding from this study is children's inability to cope with relational complexity of ternary analogies. The consistent errors in all groups on ternary analogies with distractions and complex relations were interpreted as working memory overloads. These working memory resource deficits were interpreted to have implications for learning outcome especially in the area of student-centered learning and constructivists' approaches to learning specifically in cognitive apprenticeship, mediated learning and scaffolding. So besides emphasizing prerequisites knowledge as in mastery learning, teachers also need to pay attention to balancing inhibitory control in working memory and relational representation of children's cognitive processes as well, which de facto implies the need for student-centered approach to learning.

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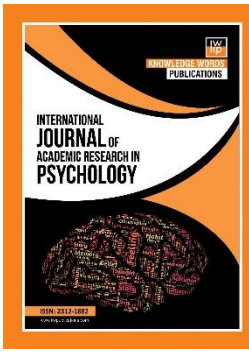
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The Effectiveness of Social Skills Training on Self-Assertiveness and Academic Self- Efficacy of Dyslexic Students

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Abstract

Background: The dyslexic child is at risk the loneliness living and the lost of social discussion coequals partnership. The aim of this study was to determine the effects of social skills training on the Self-Assertiveness and academic self- efficacy of dyslexic students. Thirty students participated in the study. The experimental design was used in which 2 groups were compared on Pre test and post test measures by using Assertiveness Inventory (GRAQ, 1975) and Academic Self-efficacy Inventory. The experimental group was given 12 week training. The collected data were analyzed to the ANCOVA analyses. The results revealed that there were significant differences between the two groups based on Assertiveness scores (p-value<0/001). However, there were significant differences found on Academic Self-efficacy scores between the two groups. Social skills training can significantly increase those aspects of Self- Assertiveness in Students with dyslexic.

Keywords: Social Skills, Self-Assertiveness, Academic Self- Efficacy, Dyslexic Students.

Introduction

The most important variables concerning the education development are self efficacy and Self-Assertiveness. Self efficacy means person's judgment about capabilities, capacities and abilities for an specific action (Bandura, 1977). Educational Self efficacy will cause the student to try self motivation in the environment through the internal motivation and obtain his efficient beliefs and behaves bravely .In recent years one of the most attractive variables for researchers has been the social abilities and its effect on the bravery and self efficacy of students which is due to the fact that the bravery is the main factor of inter personal relationships and the key of human connections(Lin et al., 2004). And has a very significant role in talents finding and the student creativity progress. Social abilities are some abilities that help people to have the positive interactions with others and

continue them and involves connection establishment, problem solving ,decision making ,self-management and relationships with other people in the same age (Aydogan, Klince, & Tepetas, 2009) .Children who have learnt the social behavior are more efficient in connection establishment with other children(Asher & Taylor, 2001) and social environment learning in comparison with children failing these social behaviors .These abilities assist children to have a more effective relationship with others .Normal children learn this ability in relationships with others like parents, sibling and peers) without trying. But most of the dyslexic children encounter with negative reactions of adolescents and other children which is due to the failure of appropriate connection with friends .In recent years the researchers have attended the social abilities subject cause according to several investigations ,the lack of social abilities affect badly on students educational performance and intensifies problems of learning and obstacles the children development and results in the inappropriate events in the educational period. According to distinct investigations students with disorders in learning like dyslexic children defect in social information process (Bauminger & Kimhi-Kind, 2008), weak interpersonal connections (Ladd & Troop-Gordon, 2003; Wiener, 2004), social rejection levels and loneliness (Estell et al., 2008), adjustment problems with both internal and external kind (Al-Yagon & Mikulincer, 2004; Sharma, 2004; Wiener, 2004).There are several investigations concerning social behaviors importance in people with specific needs like dyslexic children and according to the results ,social abilities are specially crucial for them .One of the crucial procedures for them is the social abilities training(Gresham, Sugai, & Honer, 2001) .There is no doubt in social capabilities importance in total change and adjustment of all children with special needs ,in a way that the ability to make positive connections with adolescents and other people is one of the most important dimensions of each person change .The importance of appropriate social abilities in children success in classes has been proved several times(Gresham et al., 2001) .The failure of appropriate social abilities is relevant to next problems in life like the failure in school ,failure of employment or job loss ,withdrawal and social isolation (Fantuzzo, Sekino, & Cohen, 2004; Hyatt & Filler, 2007). Generally ,according to the investigations the social abilities interference necessity in dyslexic children is stated this way :social behavior lack is the most important factor of dyslexic children failure in social displacements and is the main reason of their job loss .Social behaviors training will decrease the level of inappropriate behaviors in classes like aggression and improve student personal relationship with others (Fraser, 2005; Kamps & Kay, 2002; Kamps, Tankersley, & Ellis, 2000). Social behavior training will decrease delinquency behaviors and will increase the inclusion of dyslexic children (Matson, Dempsey, & LoVullo, 2008). Emotional and social change of children will increase their capacity for focusing on educational activities, improvement of general psychology health and behavioral problems decrease (Boo & prins, 2007; Hennessey, 2007; Hill & Furniss, 2006) .Generally the insufficiency in social abilities is relevant to the extended territory of problems like delinquency in the adolescence(Matson & Wilkins, 2009) insufficiency of attention with the deficit of attention(Boo & prins, 2007) ,change incapability ,withdrawal and social isolation, challenging behavior (Matson &Wilkins, 2009), school abandoning. According to the importance of Self-Assertiveness variables ,educational efficacy and social abilities and the fact that there was no research concerning this subject on dyslexic children in Iran and the fact that the failure of appropriate social behaviors to make positive connections will cause the dyslexic children the withdrawal and social rejection ,one of the best options for these people to become sociable and capable of showing existence tools and efficacy in the society is the social abilities training .Therefore this research is dedicated to study the affect of social abilities

training on the self educational efficacy and the existence tools of dyslexic students in the schools of Teheran city.

Materials and Methods

The present research is a semi-experimental research with pretest - post test design with control group. The target population for this study was students with dyslexia, ages 12-16 years-old who was studying schools of Tehran city during the 2013-2014 academic years. The studied people in the research were 30 male students. In this research multistage cluster random sampling was used. At first one region was chosen randomly among Tehran's regions and then among educational areas of that region one region was chosen randomly. Then two schools were selected from male schools. Considered sample was chosen randomly. Then randomly assigned to an experimental and a control groups. The experimental group received social skills training two times a week and total sessions lasted in two months all training session were conducted by researcher at the school.

The Assertion Inventory: *(AI; Gambrill & Richey, 1975).* The Al is a 40-item self-report questionnaire that assesses discomfort and response probability concerning assertive responding in a range of situations that demand an assertive response. For each item the respondent is requested to indicate the degree of discomfort or anxiety on a 5-point
scale that ranges from I *(none)* to 5 *(very much)* and to indicate the probability of displaying the behavior if actually presented with the situation on a 5-point scale ranging from 1 *(always do it)* to 5 *(never do it).* The scale has been shown to have good test-retest reliability, and discomfort scores have been shown to discriminate adequately between unassertive and assertive college students. Furthermore, improvement in discomfort scores has been found following AT. The assessment of both discomfort and response probability allows identification of different subgroups of clients. In our study, subjects were selected on the basis of a combination of high discomfort and low response probability.

Academic Self Efficacy :scale is an Indonesian version instrument that intended to asses the level of student's efficacy in regards with academic environment. Consists of 15 items this scale was developed by Rahardjo (2012) based on self-efficacy dimensions from Bandura, which reflect one's person Magnitude, Strength and Generality as a student. An adjusted scale was intended to academic environment. The responses alternatives were presented of six grades scale that extended from strongly agree into strongly disagree.

First the intervention and control groups were examined by the social skill subscales. The two groups were compared and no significant difference was found in the variable like IQ and age.
Intervention group was received the social skills training at 2 months, in 12 sessions. Training was conducted through a program that included coaching, feedback, modeling, and role playing and making chips. It is worth mentioning that during the intervention, children in control group did not receive special training and proceeded to perform daily activities. The skills that were trained during 12 sessions in the intervention group included: Greet and introduce themselves to the others, To allow others to use their devices, Follow the instructions and rules, Attention to others speaking, To apologize when doing mistake, To cooperate with friends, Maintenance of school facilities

At the end of training period, and 2 months later, all subjects were evaluated again by above measure. The intervention program attempts to increase understanding of social skills in boys with dyslexia, and attention to improving Self- Assertiveness and academic self- efficacy functioning.
The SPSS version 21 was used to statistical analysis of data, and ANCOVA analyses test was used to examine relationships between variables.

Results

30 children with dyslexia participated in this research. The youngest child was 12 years old and the oldest one 15 years old. The Statistical indexes of the subjects' age concerning the group have been reported in Table 1.

Table 1: Descriptive indexes of the subjects' age concerning the group:

Groups	N	Max	Min	M	SD	t	P
Experimental	15	15	12	9.34	2.12	.193	.834
Control	15	15	12	9.12	2.30		

Regarding the written figures in Table 1, the average of the subjects' age of the experimental group was more compared to the control group. The isotropy of the control and experimental groups in the age average was analyzed through the statistical test called Independent T. There was not the significant statistical difference in the subjects' age average in control and experimental groups (p=. / 834)

Table 2: Descriptive indices of Self- Assertiveness and self- efficacy for experimental and control groups in pretest and posttest situations

	Experimental group				Control group			
Variable	Pretest		Posttest		Pretest		**Posttest**	
	M	SD	M	SD	M	SD	M	**SD**
Self-Assertiveness	105.43	11.58	135.8	14.53	101.63	13.54	99.2	**14.23**
self- efficacy	122.2	`13.26	144.5	17.55	124.86	14.032	123.46	**15.88**

As Table 2 shows there are some differences between the average of control group and experimental one in the research variables; but being significant of these differences is not clear to us. Then for comparing the group the ANCOVA analyses has been used regarding the existence of some dependent variables and their interval nature and also the performance of pre test.

Table 3: The results of ANCOVA for comparing Self-Assertiveness and self- efficacy in two groups

Source of change	**Dependent variable**	SS	**D**f	MS	F	Sig	2η
group	Self-Assertiveness	1024.34	1	567/46	67/46	0/001	**./ 80**
	self- efficacy	152734.	1	758/34	45/36	0/001	**./67**

ANOVA revealed There was statistically significant difference between the two groups at p=0/001with and 'f value of 67/46

The ANOVA analysis shows that the difference between them is significant at .05 level, therefore occurred by chance.

Discussion

The purpose of this study was the effectiveness social skills Training on Self- Assertiveness and academic self- efficacy of dyslexic students. The results revealed that there were significant differences between the two groups based on Assertiveness scores. However, there were significant differences found on Academic Self-efficacy scores between the two groups. In other words, the level of the self assertiveness and the academic self efficacy of dyslexic students of experiment group have increased considerably in comparison with the pre training period. According to the results of diverse investigations ,dyslexic students defect in social abilities processing, weak interpersonal abilities, high level of social rejection and loneliness, disorders of behaviors and depression ,less intimate friends ,high level of aggressive behaviors ,disruption of interpersonal relationships ,different problems concerning interpersonal conflicts ,adjusting problems and the low level of positive social behaviors .Describing this issue, diverse problems that dyslexic students manifest interacting with social behaviors ,is due to the lack of the leadership and positive social abilities maintenance .Actually the lack of appropriate social abilities will decrease the self assertiveness and self efficacy of students .Describing this issue ,the self assertiveness and academic self efficacy of these students has lowered which is due to the weakness of the interactive and nonverbal abilities and attending the fact that this ability is one of the main factors of social abilities .On the other hand, it is possible to mention that these students have lower grades in social behaviors establishment in comparison with the other students because they utilize the aggressive pattern and the weak isolation pattern and the lack of ability to decode the nonverbal signs in social behaviors and this lack will result in the self assertiveness and the academic self efficacy. The possible reason of increasing the self assertiveness level of dyslexic students in the acquisition and application of the social behaviors ,is a foundation on which the individual relationships are constructed. Students who learn the social behaviors truly, practice and apply their competence, will succeed in friends finding and memberships of friends groups ,have positive interactions with their friends and show a range of acceptable behaviors .Dyslexic students who learn the social behaviors well and learn the rules of their friends groups and establish positive and strong relationships with the family members and the society ,mostly will show the high level of the self assertiveness and the academic self efficacy .In fact dyslexic students who learn social behaviors well and show appropriate behaviors socially have a more positive self concept

which will result in the high level of the self assertiveness and recognizing limitations and capabilities of their own and an appropriate academic self efficacy. The social behavior application influences the improvement and regulation of interpersonal relationship ,social responsibilities acceptance ,correct decision making and conflict solution and it is possible to obtain these aims only by teaching the fundamental abilities to the dyslexic students .Social abilities training will improve the abilities regarding the self assertiveness and concerning this issue ,the weak social abilities of dyslexic students will harm their self assertiveness and academic self efficacy which will exacerbate their situation by their consecutive fails in the school and the incorrect comparison between them and their friends .In fact the social behavior training can increase the level of the self assertiveness and self efficacy of students by providing applicable sources (verbal encourages and individual experiences).When a student can assert himself in the class and can ask his question without any shame and stress of the class population or the teacher and states his opinions in the class or be able to assert himself in the class and manifest his academic capabilities ,will increase his functionality .It is possible to recognize 75 percent of dyslexic students by their lower social ability in comparison with other children ,so according to the findings of this investigation ,it is recommended to add the social abilities in their academic and therapeutic programs .

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The Relationship between Students' Test Anxiety, Attachment Styles and Perfectionism

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Abstract
Test anxiety is excessive worrying about test performance. When preparing for exams, a little sense of anxiety is perfectly normal. However, if it goes beyond the natural range, it may disrupt the performance of students during exam. It is because they will have a feeling of powerlessness in expressing and explaining their learning. Therefore, the study was aimed to investigate the relationship between students' test anxiety and attachment styles and perfectionism. For this purpose, 200 male and female third-grader high school students were selected by multistage cluster sampling method. The sample filled out Attachment Styles Questionnaire (Besharat, 2000), Frost's Perfectionism Questionnaire, and Sarason Test Anxiety Questionnaire individually. This study was based on correlation assumptions. Research criterion variable included test anxiety at one level, predictive variables included attachment at three levels of Secure Attachment**,** Ambivalent Attachment and Avoidant Attachment, and perfectionism at six levels as personal standards, organizing, concern on mistakes, doubting on actions, parental criticism and parental expectations.
The results of multiple regression analysis showed that ambivalent attachment pattern was a significant predictor of test anxiety and that, perfectionism played a significant role in test anxiety (P<0/01). In addition, the results of variance analysis of the comparison of attachment patterns in male and female students showed that the level of ambivalent attachment in girls was higher than that of boys (P<0/05). The comparison of perfectionism and its related indicators showed that girls were more organized than boys (P <0/05). The comparison results of test anxiety between girls and boys indicated that there was no significant difference between the two groups. ambivalent attachment style was one of the Traumatic variables of students' test anxiety, which is accompanied with a feeling of insecurity and distresses the students. The perfectionism, as creator of rigid thought framework, was the important factor of this type of anxiety.
Keywords: Attachment Styles, Perfectionism, Test Anxiety.

Introduction

Anxiety may directly lead to poor performance, because the nature of evaluating conditions of the test disturbs concentration toward potential negative consequences. In this case, anxiety is not necessarily identical with physiological arousal. However, it may expose

processes through which arousal or situational factors break the concentration on responses necessary for the task and divert it to negative cognitions during the test (Abolghasemi, 2003). Research findings confirm the effect of anxiety on performance, especially on the academic performance of students (Mousavi et al., 2008). test anxiety is among the various barriers to the use of knowledge, understandings, and previous information. Giada and Vouldlo (1989) defined test anxiety as an unpleasant emotional reaction to evaluation situations at schools or in classrooms. test anxiety is an unpleasant emotional condition accompanied with behavioral and physiological problems which is experienced in formal exams or other evaluative situations (Duske, 1980).

As an emotional consequence, test anxiety may root in attachment style and childhood attachment to parents. This may explain many behavioral and psychological states of the individuals throughout their academic and personal life. In general, the attachment styles determine the emotional and cognitive rules as well as the strategies which control emotional reactions of people in conflict situations and interpersonal relations (Shaver, Collins, and Clark, 1996). The results of Dunn et al. (2013) are indicative of a relationship between test anxiety dimensions and avoidant and ambivalent attachment styles of high school students and graduate students.

Perfectionism is another variable which may affect test anxiety. It is characterized by a person's striving for setting excessively high performance standards (Burns, 1980) accompanied by overly critical self-evaluations (Frost, Marten, Lahart and Rosenblate, 1990). Perfectionists strain toward unobtainable goals for people who are important for them (Felt et al., 1991). Therefore, perfectionism may lead to problematic interpersonal relations (Felt and Hooit, Blank Steen, 1998). Although these expectations are difficult to meet, these standards should be achieved by the person to be approved and accepted by the others (Frost et al., 1990; Hooit and Felt, 1991). According to various studies, there is relationship between perfectionistic feedbacks, especially those of self-oriented and community-oriented perfectionism, and anxiety and anxiety disorders (Antony et al., 1998; Juster et al., 1996; Frost & steketee, 1997; Heimberg et al., 1995). Ram (2005) found that positive perfectionism is positively correlated with academic performance and negative Perfectionism has a significant negative correlation with academic performance. Therefore, it can be said that perfectionism has a relationship with test anxiety. In the research the outcomes of attachment styles and the affecting dimensions of perfectionism are studied using Bowlby's theory and Frost's theory (Frost, et al., 1990) respectively. In addition, as the two key variables of test anxiety, attachment styles and perfectionism have a significant correlation. In this regard, the results of the research showed that there is a significant relationship between attachment styles and positive and negative perfectionism; secure attachment style has a positive correlation with positive perfectionism and a negative correlation with negative perfectionism. Non-secure attachment styles (ambivalent and avoidant) have a negative correlation with positive perfectionism and a positive correlation with negative perfectionism (Basharet et al., 2011). Therefore, the main research question is: Is there a relationship between test anxiety and attachment styles and perfectionism?

Method

This was a correlation research. Statistic population included all male and female third-grader high school students enrolled in Zanjan in 1392-93 academic year [2013-14]. The minimum sample size required for structural equation modeling data was of great importance (Mc kitty,

2004). Many researchers believe that the minimum sample size required is 200 people (Schreiber, 2006) though, there is not general agreement on the sample size required for factor analysis and structural models (haulter, 1983; Garver & Montzer, 1999; Sive et al., 2006, Hu, 2008). Having this in mind, 10 schools (5 female schools: Shahid-fatimiyeh, Shahid-zeynabiyeh, Parvin-e-Etesami, Hajar and Rughani Zanjani, and 5 male schools: Shahid-peyambar-e-azam, Shariati, Amirkabir, Saadat and Allameh Helli) were randomly selected out of 2 Education Areas of Zanjan City using multistage random sampling method. Then, 200 students were randomly selected out of these schools and, observing inclusion and exclusion criteria of the study, the questionnaires were distributed among them. Being explained by the researcher, the participants responded the questionnaires.

Data Collection Instruments

Field study was used for data collection purposes. The variables were assessed by questionnaires, which are explained in the section of data collection instruments.

A) Adult Attachment Styles Questionnaire

Attachment style of the subjects was determined by Adult Attachment Scale (Basharat, 2000). This scale was developed through using the materials of Hazan and Shaver attachment test (1987). It is a two-part questionnaire which was normalized on the students of Tehran University. At the first part, the three Attachment styles – Secure**,** Ambivalent and Avoidant – are distinguished through 21 questions in accordance with Likert 5 point scale (non=1, little=2, average=3, much=4, very much=5). Questions related to secure attachment style include (1,3,5,7,11,12,14,19), to ambivalent attachment style (2,6,9,10,16,17,21) and to avoidant attachment style (4,8,13,15,18,20). The highest score in this section determines the general attachment style of the person. At the second part, participants describe their attachment style by choosing an option out of the three options describing three kinds of attachments. In the present research, the first part of the questionnaire was used to determine the general attachment style of the person.

Basharat (2000) used Cronbach's alpha and test-retest method to determine the reliability of the questionnaire. Cronbach's alpha coefficient for Secure**,** Avoidant, and Ambivalent Attachment styles concluded at 0.74, 0.71 and 0.69 respectively. In another study, Cronbach's alpha coefficient of the questionnaire in the general population was shown more than seventy percent. This coefficient represents a relatively satisfactory internal consistency. Content validity of the scale was evaluated by measuring the correlation between the scores of four psychologists, all of which was significant at 0.01(Besharet, 2000). Simultaneous implementation of this scale with *Coopersmith Self-Esteem Inventory* confirmed the validity of attachment styles questionnaire.

B) Frost's Perfectionism Questionnaire

Frost's Multidimensional Perfectionism is a 35 item questionnaire developed by Frost (1990) to measure perfectionism. The questionnaire includes 6 subscales as follows:

1) Concern over Mistakes: includes questions (9, 10, 13, 14, 18, 21, 23, 25, and 34). It is indicative of the negative reaction to mistakes, tendency to interpret mistakes as a failure (Equalizing mistakes with failure), and tendency to believe that failure (mistake) is followed by losing the respect and support of others.

2) Parental expectations: The expectations of parents: believing that, parents or either of them has set high goals and standards for the person. It includes questions (1, 11, 15, 20, and 26).
3) Parental criticism: includes questions (3, 5, 22, and 35). The person perceives that parents or one of them are/have been very critical.
4) Doubts about actions: consists of a few questions from the Maudsley's Compulsive Obsession Inventory and includes questions (17, 28, 32, and 33).
5) Personal standards: includes questions (4, 6, 12, 16, 19, 24, and 30). It represents that the person sets high standards and places excessive importance on these standards for self-evaluation purposes.
6) Organization: includes questions (2, 7, 8, 27, 29, and 31). This sub-scale evaluates the tendency of the person to be disciplined and organized. It is indicative of the person's emphasis on doing things in order, which is correlated with perfectionism.
The questions measure subjects' perfectionism rated from 1 to 5 based on Likert 5 point scale (strongly disagree, disagree, neutral, agree, and strongly agree). Using factor analysis, Frost Himberg et al (1993) in their study on perfectionism scale determined that the scale is both positive and negative, that is, negative perfectionism can be concluded by the four subscales of Concern Over Mistakes, Parental Expectations, Parental Criticism, and Doubts About Actions and positive perfectionism can be concluded by the two subscales of Personal Standards and Organization.
Validity of the scale in the study of Frost et al. (1990) has been reported as general perfectionism 90%, Concern over Mistakes 88%, Parental Expectations 84%, Parental Criticism 84%, Doubts about Actions 77%, Personal Standards 83% and Organization 93%. This questionnaire is highly correlated with other perfectionism scales particularly with those of Burns Perfectionism Scale (Burns, 1980), self-assessment scale (Juter, 1968), and Perfectionism Scale of Garner et al. (1983) (Frost et al., 1993). The study conducted by Frost et al. (1993) also showed that perfectionism assessment instruments formed on the basis of a different conceptualization by Frost et al. (1990) and Flett & Hewitt are highly correlated.

C) Test Anxiety Inventory: the Sarason's Test Anxiety Scale was used for measuring test anxiety level. This scale consists of 25 items responded by the subjects based on a multiple choice inventory (0 = never, 1 = rarely, 2= sometimes, 3=often). The test has a minimum score of zero and a maximum of 75. Higher scores indicate more anxiety.
In a sample of students, Cronbach's alpha coefficient of test anxiety questions was calculated as 0.94 for the total sample, 0.95 for female participants and 0.92 for male subjects, indicating high internal consistency of the scale. Correlation coefficients of the scores of the subjects were calculated twice with an interval of four to six weeks at r=0/77 for the total sample, r=0/88 for female subjects and r=0/67 for male subjects, which is indicative of satisfactory reliability of the scale (Besharet, 2004). Humand (1995) reported the scale validity at 0.84 by split-half method. Significant correlation of the scale with improvement and intelligence is indicative of its *construct validity*. Convergent validity coefficient between this scale and school anxiety questionnaire was reported at 0.84 (Phillips, 1996).
In the present study, Cronbach's alpha was used to determine the reliability of the questionnaires of attachment styles, perfectionism, and test anxiety.

Table 1: The results of internal consistency of research instruments

variable	Number of questions	Cronbach's alpha
Concern over Mistakes	9	0.79
Parental Expectations	5	0.59
Parental Criticism	4	0.65
Doubts About Actions	4	0.62
Personal Standards	7	0.61
Organization	6	0.81
Perfectionism	35	0.79
Secure attachment	7	0.72
Avoidant attachment	7	0.63
Ambivalent attachment	7	0.65
Test Anxiety	25	0.78

The results of internal consistency of the data collection instruments in this study are presented in Table 1. Using Cronbach's alpha, internal consistency of the variables was calculated at 0.59 to 0.81. This implies that the instruments used in this study had good internal consistency.

Findings

Statistical analysis done in this section includes descriptive analysis and inferential analysis.

Descriptive Statistical Analysis

In the section, after data collection, the sample was described using descriptive statistics which involves Central Index, mean, Distribution and standard deviation.

Table 2. descriptive statistics of the variables

Variable	Count	Mean	Standard deviation	Lowest	Highest
Concern over Mistakes	200	27/10	6/80	11	45
Parental Expectations	200	16/85	3/59	5	25
Parental Criticism	200	10/17	3/14	4	18
Doubts About Actions	200	11/94	4/68	3	63
Personal Standards	200	24/29	4/29	10	35
Organization	200	21/77	4/78	7	30
Perfectionism	200	112/11	16/34	78	194
Secure attachment	200	19/08	3/11	10	28
Avoidant attachment	200	18/06	3/457	11	30
Ambivalent attachment	200	1798	5/19	8	31
Test Anxiety	200	64/49	11/92	32	110

According to the results of Table 2, among the components of perfectionism, concern over mistakes had the highest mean 27.10 and parental criticism had the lowest mean 10.17. The mean of secure attachment, avoidant attachment, and ambivalent attachment was

19.08, 18.06, and 17.98, respectively and the mean of test anxiety level was achieved at 64.49.

Inferential Statistics and Hypothesis Testing

Data normalization using Kolmogorov-Smirnov test:

In order to use statistical techniques, normal or abnormal distribution of the collected data must be determined. It is because, in normal distribution, the parametric tests may be used to test hypotheses. In case of abnormal distribution, the nonparametric tests will be used. At this stage, we study the results of the test for dependent and independent variables and choose suitable test for the study of the hypotheses based on the results.

Table 3: Normality of dependent and independent variables

Variable	Kolmogorov-Smirnov	p-value (sig)	Confirmed hypothesis	Conclusion
Concern over Mistakes	1/02	0/28	H0	Normal
Parental Expectations	1/10	0/17	H0	Normal
Parental Criticism	1/22	0/13	H0	Normal
Doubts About Actions	1/96	0/25	H0	Normal
Personal Standards	1/12	0/16	H0	Normal
Organization	1/05	0/22	H0	Normal
Perfectionism	0/98	0/29	H0	Normal
Secure attachment	1/04	0/23	H0	Normal
Avoidant attachment	1/18	0/12	H0	Normal
Ambivalent attachment	1/04	0/23	H0	Normal
Test Anxiety	0/92	0/36	H0	Normal

The results of normality of variables are presented in Table 3. Considering the results of the table, all variables are normal at α=0.05. For all of them, the p-value is greater than 0.05. According to the results of following table, if the significance level will be greater than error value, the null hypothesis will be concluded. If significance level will be smaller than error value, hypothesis one will be concluded.

It is worth noting that, depending on the scale type and the normality of the population, the Pearson correlation coefficient was used for the relationship between the variables.

Testing Research Hypotheses

I. The main hypothesis of the study: There is relationship between students' test anxiety and attachment styles and perfectionism.

Table 4. The correlation matrix between attachment styles, perfectionism (indexes) and test anxiety (Pearson method)

variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(1	(1
(1)Concern over Mistakes	1										
(2)Parental Expectations	0.471**	1									
	0.001										
(3)Parental Criticism	0.356**	0.325**	1								
	0.001	0.001									
(4)Doubts About Actions	0.473**	0.298**	0.231**	1							
	0.001	0.001	0.001								
(5)Personal Standards	0.288**	0.364**	-0.079	0.167*	1						
	0.001	0.001	0.265	0.018							
(6)Organization	0.049	0.010	-0.185**	0.013	0.276**	1					
	0.493	0.884	0.039	0.853	0.001						
(7)Perfectionism	0.813**	0.662**	0.403**	0.641**	0.576**	0.356**	1				
	0.001	0.001	0.001	0.001	0.001	0.031					
(8)Secure attachment	0.041	0.098	-0.019	-0.040	0.018	-0.042	0.016	1			
	0.561	0.166**	0.793**	0.578**	0.803	0.558	0.817				
(9)Avoidant	0.147*	0.061	0.214**	0.134	0.189**	0.084	0.228**	-0.241**	1		

attachment	0.037	0.390**	0.002	0.058	0.007	0.240	0.011	0.021			
(10)Ambivalent attachment	0.353**	0.154*	0.227**	0.184**	0.058	-0.041	0.280**	0.010	0.344**	1	
	0.001	0.030	0.001	0.009	0.417**	0.562**	0.001	0.886	0.011		
(11)Test Anxiety	0.446**	0.357**	0.360**	0.473**	0.101	0.004	0.510**	-0.094	0.207**	0.355**	1
	0.001	0.001	0.001	0.001	0.065	0.735	0.011	0.186	0.003	0.001	

**p<0.01 *p<0.05

The results of correlation showed that there is significant and positive correlation between test anxiety and avoidant and ambivalent attachment styles (0.001). Also, there is positive and significant correlation between test anxiety and perfectionism (0.001). The relationship between test anxiety and perfectionism subscales (including concern over mistakes, parental expectations, parental criticism, and doubts) was significant and positive (0.001). Although there was a positive correlation between test anxiety and perfectionism sub-scales, such as personal standards and organization, it was not significant.

The linear regression was used to study separately the relationship and the role of each independent variable with test anxiety.

Table 5: Adequacy of models of relationship between test anxiety and attachment styles

Correlation coefficient	Coefficient of determination	Adjusted Coefficient of determination	SD error	Dooorbin – Vastoun
0/374	0.140	0/127	11/13	1/865

The correlation between independent variables and dependent variables is equal to 0.374. The coefficient of determination was obtained at 0.140. This value indicates that 14% of variation in test anxiety is associated with attachment styles. Since the statistic value of Doorbin-Watson is greater than standard value of 1.5, it is concluded that the remaining values are independent. Based on the mentioned criteria, the model has efficiency.

The following table shows the significance of regression calculated by Fisher's F test.

Table 6: Fisher F test, the significance of the regression in relationship between attachment styles and test anxiety					
Model	sum of squares	gree of freedom	an of square	F statistic	Sig.
Regression	3951/768	3	1317/256	10/622	0/001
Residual	24307/130	196	124/016		
Total	28258/898	199			

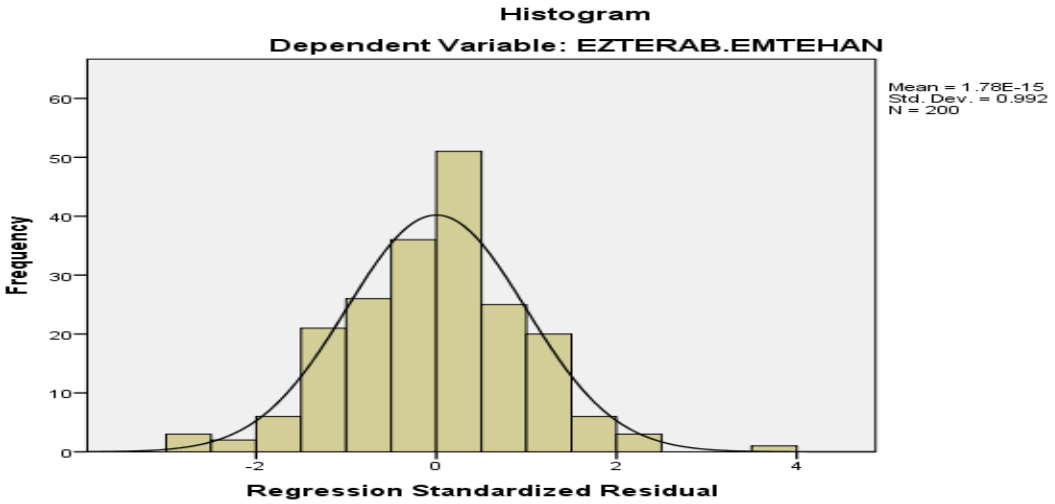

Figure (1): the relationship between attachment styles and test anxiety based on F test

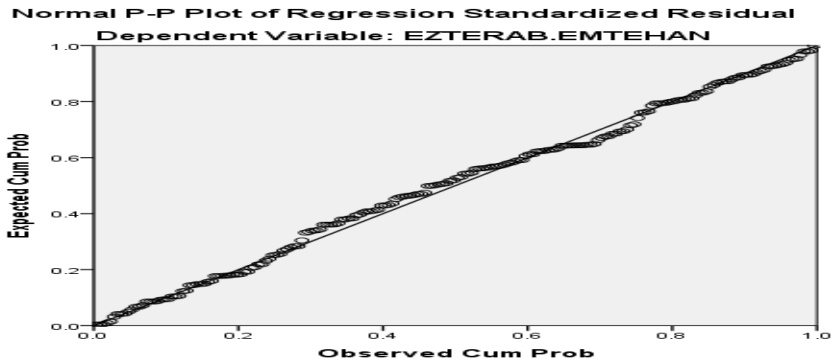

Figure (2) Normality of the residuals

Table 7: Regression coefficients of attachment styles and test anxiety					
Model	Non-standard coefficient		Standard coefficient	t	Sig.
	B	Std. Error	Beta		
(constant value)	52/045	7/372		7/060	0/001
Secure attachment	-0/304	0/263	-0/079	-1/158	0/248
Avoidant attachment	0/255	0/252	0/074	1/012	0/313
Ambivalent attachment	0/758	0/163	0/330	4/655	0/001

According to Table 7, the results of Multiple Regression Test Analysis shows that standardized beta coefficient gives a measure to assess the share of each variable in the model. The p and t values refer to the effect of each predictor variables. The t and p values show that there is significant relationship between predictor and criterion variables. Accordingly, ambivalent attachment style is a significant predictor for test anxiety (β =0.330). The Beta's positive sign indicates that test anxiety can be seen significantly more in people with ambivalent attachment.

II. There is relationship between perfectionism and test anxiety of students.

Table 8: The adequacy index of model of relationship between test anxiety and perfectionism

Dooorbin - Vastoun	SD error	Adjusted Coefficient of determination	Coefficient of determination	Correlation
1/760	10/27779	0/256	0/260	0/510

Table 9. F-test on the significance of the regression of the relationship between perfectionism and test-anxiety

Model	Sum of squares		Degree of freedom	Mean-square	F-statistic	Sig.
Regression	7343.552		1	7343.552	69.519	0.001
Residual	20915.346		198	105.633		
Total	28258.898		199			

The results in Table 9 show that P <0.001. As a result, the entire model is significant.

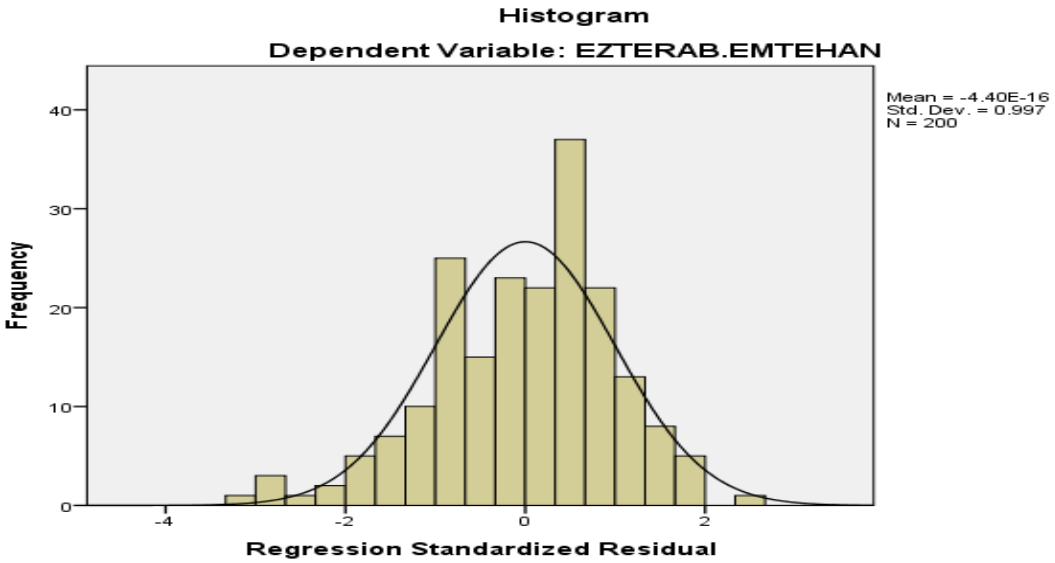

Figure (3): the relationship between perfectionism and test anxiety based on F test

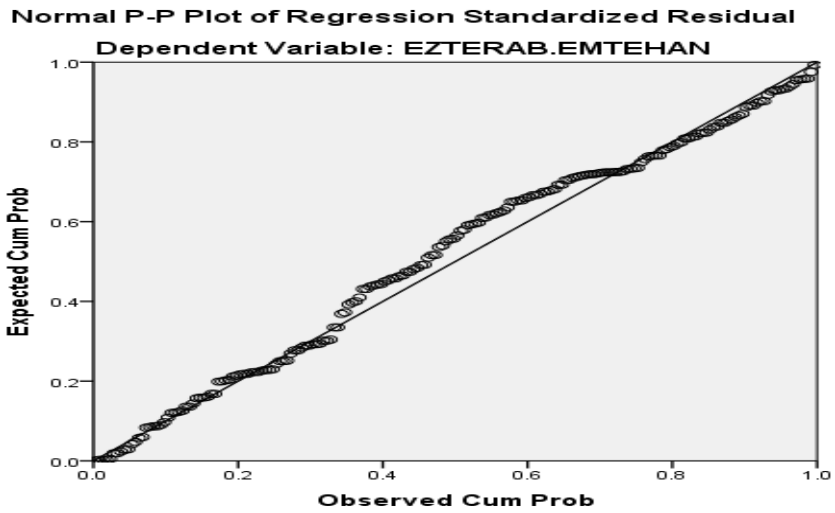

Figure (4): the normality of residuals

Table 10. Regression coefficient of the relationship between perfectionism and test anxiety

Significance level	T	Standard coefficients	Non-standardized coefficients		Model
		Beta	Std .Error	B	
0/01	4/515		5/051	22/803	constant value
0/01	8/338	0/510	0/045	0/372	Perfectionism

According to Table 10, the results of Multiple Regression Test Analysis show that standardized beta coefficient gives a measure to assess the share of each variable in the model. The p and t values refer to the effect of predictor variable. The t and p values show that there is significant relationship between predictor and criterion variables. Accordingly, perfectionism is a significant predictor for test anxiety (β =0.510). The Beta's positive sign indicates that test anxiety can be seen significantly more in people with perfectionism.

Discussion and Conclusion

After reviewing and considering parametric test assumptions in this study, Pearson correlation and multiple regression tests were used to evaluate the correlation between predictor and criterion variables. The results of correlation between test anxiety and attachment styles showed that there is significant and positive correlation between test anxiety and avoidant and ambivalent attachment styles (0.001). Although there was a negative correlation between test anxiety and secure attachment, it was not significant. The results of determination coefficient in regression also showed that 14 percent of variation in test anxiety is associated with attachment styles. The standardized beta coefficient also showed that ambivalent attachment style is a significant predictor for test anxiety. This means that test anxiety can be seen significantly more in people with ambivalent attachment. These results are consistent with those of Öztürk (2010); Bifulcoet al. (2006); Morris et al. (2001).
Mutlu and Ozturk (2010) found that students with frightened and distressed attachment styles experience higher levels of social anxiety than students with secure attachment style. The results of Bifulco et al (2006) suggest that non-secure attachment style explains significantly anxiety and depression in the studied women.

In a study on the relationship between attachment styles and symptoms of anxiety and depression in adolescents, Morris et al. (2001) showed that the teens with secure attachment style had significantly lower anxiety and depression than those with non-secure attachment (avoidant and ambivalent) styles. Regarding the relationship between avoidant and ambivalent attachment styles and test anxiety, it can be explained that excitement is the central point of the attachments. The excitements such as anxiety are strategies and extreme states of avoidant and ambivalent attachment styles.

The results of Pearson correlation between test anxiety and perfectionism and its indicators showed that there is significant and positive correlation between them ($p<0.001$). The correlation between test anxiety and concern over mistakes, parental expectations, parental criticism, and doubts sub-scales was significant and positive ($p<0.001$). These results are consistent with those of Ghadami (2014); Egan (2008); Habkeh and Flynn (2002); and Kuuy and Mac Inner (2007). In this research, the results showed that dimensions of perfectionism affect test anxiety in students. Based on these results, it can be explained that perfectionism increases the unrealistic expectations of students and their critical evaluation of themselves. Perfectionism leads to the imposition of measures such as ideal measures to achieve results. The process of imposing perfectionism standards on students and their non-alignment with their capabilities increases the fear of failure and avoidant behaviors. Clearly, this contributes to students' test anxiety. By internalizing perfectionism, particularly in academic field, the unrealistic expectations and inflexible aspirations from student will increase. In this case, the individuals not only cannot experience the success, they also experience anxiety and fear of failure such as poor grades. This lack of personal satisfaction due to perfectionism has important contribution to students' test anxiety.

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The Relationship between Organizational Climate, Job Commitment and the Mediating Role of Job Consciousness among the Employees of Islamic Azad University of Yazd

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Abstract
The purpose of this study was to examine the relationship between organizational climate and job commitment with regard to the role of job consciousness in the employees of Islamic Azad University of Yazd. In this study, the descriptive-correlation method is used, because the main objective was to investigate the relationship between several variables. By the calculation of Cochran, 195 subjects were randomly, and with attention given to the proportions of the population selected for stratified sampling. To collect data for organizational climate Halpin and Croft questionnaire was used, and for the variable of organizational commitment, Allen and Meyer questionnaire and to determine the variable of job consciousness a questionnaire designed by Iraj Soltani was used. The results of the research hypothesis, achieved through stepwise regression and path analysis showed that in the relationship between organizational climate and job commitment, job consciousness has a mediating role. Also Furthermore was a significant relationship between the variables of organizational climate and job consciousness with job commitment (p<0/01). The climate of the population for this study had more predictive power than the job consciousness of its employees in connection with employee engagement. The correlation between organizational climate and job commitment in people who have a higher job consciousness is stronger. This is while the importance of structural factors organizational climate can be an effective agent job such as debatable and also overcome the job conscience.
Keywords: Organizational Climate, Job Commitment, Job Consciousness, Islamic Azad University.

Introduction

The most important capital is the human resources and the quality of capital and the higher the likelihood of success, survival and development will be more is organized. One of the job attitudes, organizational commitment is that the statement of the caseis that the employee organization wish to remain in membership of the organization. Organizational commitment means a person, organization knows their representative predicted (Shafiabadi, 2012).

Previous studies have shown that work experience, organizational factors and individual commitment to act as a background. Risk factors in the development of organizational commitment and its effect on the several aspects of the behavior of employees refers to the following:

-Absenteeism and turnover rates are higher for those with a sense of commitment, lower.

-Those who are more committed, less likely to seek another job to pay.

-Commitment to effort and performance. It means that the employees' commitment to their organization, the more they try to do more for the better (Goodarzi & Gominian, 2002). Organizational commitment and consensus in the organization is dependent on organizational culture. Somewhere else, the relative degree of organizational commitment as a person's identification with the organization and his involvement and participation has been defined. In this definition, the commitment of three factors:

1- According to the goals and values of the organization
2- Tends to considerable effort to the organization
3- Strong and deep wish to continue membership in the organization.

The owner rational people who really are part of your organization, it will have a greater commitment to increase their efforts and decrease of turnover in them (Birjandi, 2000). One of individual and organizational factors as key factors considered be relevant to organizational commitment, the climate is dominant. Studies show that policies, plans, financial position or shares of any organization suitable working environment does not become, but what makes the company an ideal work environment, employees feel about the environment work. Working conditions for the creation and growth of employees feel summarized in three factors: management, job and colleagues. Over the last few decades of the first definition of organizational climate is going. During this period, various definitions proposed that the essence of all of them in two elements taken:

1. A system of cognitive (mental element), which reflects the value system of the organization.
2. Mass withdrawal (emotional element) of policy, practice and methods of organization arise.

The first case is linked to the culture of the Organization and more about the other represent a stream that is associated with the leadership. The atmosphere, the view is a non-visible part of the vision and culture of the Organization, like an iceberg floating in the water. Although thinkers about the definition of organizational climate do not have consensus, but most of its features in the same views have been expressed. (Gardner, 2005; Babai et al., 2006)

Moran and Volkwayne (1992) in their assessment of organizational climate to four point to the following approach: Structural approach:

Organizational climate, organizational structure is considered to be objective. Since the members of the organization share common structural features, find common understanding that climate forms. In other words, organizational climate organizational structure, its objective is that people encounter it and understand it.

Conceptual Approach

Based on this approach, the basic part of the creation of the organizational climate within individuals people respond to situational variables in ways that are meaningful to them is psychological. Describe the psychological climate of the organization.

Interactive Approach

According to this approach, in response to situations that they face to reach a common agreement that is the foundation of organizational climate. The disadvantage of this approach is that the impact of organizational culture on cooperation and communication among members of the group are not considered.

Cultural Approach

According to this approach, organizational climate is a result of the interaction of a group of people who share a frame of mind. The disadvantage of this method is that it requires an explanation of the relationship between culture and climate. (Moran and Volkwayne, 1992; Khosravian et al., 2009)

The Faghihi research (2012) entitled "The relationship between climate and organizational commitment of teachers in primary schools for girls in Varamin city" in educational organizations also led to the following conclusions:

1) Level of organizational commitment in schools that have the appropriate climate than schools that do not have good organizational climate are significant, more.

2) The organizational affective commitment in schools that have the appropriate climate than schools that do not have good organizational climate is significantly, remarkably higher. 3) The continuous commitment of organizational climate in schools that are appropriate to the proper climate is significantly schools, remarkably higher.

4) Organizational normative commitment in schools that have the appropriate climate than schools that do not have good organizational climate is significantly, remarkably higher.

According to research by Goleman et al (2001) the impact on the profitability of the organization's excellent climate is one-third and two-thirds of the economic situation and the competitive dynamics. Morris and Bloom (2002) examined the relationship between the position and the results showed that their commitment, culture and climate have a significant influence on employee job satisfaction. In this study, the mediating role of job consciousness in the relationship between climate and organizational commitment was investigated it is not short. Job consciousness, a cultural norm is to do good work in the community, positive spiritual values and believes that the work itself has an intrinsic value (Talebian, 2003).

Essentially labor monotheistic vision of Islam is a value more effort in the work world and the hereafter, about happiness and salvation in this world and the Hereafter provides individuals and their high degree of jihadists in the way of the Lord range. It is necessary to work, subject to compliance with specific requirements including a detailed and comprehensive work to be done. As in the field of the Prophet Muhammad has been narrated as: When do you want it done in a good and comprehensive, because all of these things and applying them to the terminal properly defined and introduced (Majlesi, 1403 AH).

Incentives and conscientious work of the Iranians, through their rituals and ceremonies for collective work was being formed and has been strengthened. The rituals and synergies in all the structures of life and can not only considered for a job. In fact, the complexity and interaction of these rituals and synergies at all levels of life, the production and reproduction of consciousness have been required to do. All types stories and poems of work, proverbs, tales, different cooperation and other areas of the culture of the people, of the factors of establishing and strengthening the necessary motivation to have work done (Sefidgar, 2009).

Some examples are found in the oral literature that discouraged job count and delays in work, people are forced to work more seriously. In fact, this type of literature which reflects the viewpoint of society to the unemployed person is, at the same time, it keeps people from unemployment or underemployment and creating an interest, invites him to work. That is a double (a punishment / reward) leads the person to work. Oral literature available in the community, as a collective soul acts. Samples referred to in oral literature and evidence of involvement and interest in the work and the people against the valuations, care work and dedication to the plane. When the collective spirit and determination of such judgments based on people during growth, the values that are intrinsic to them at any time, respect, and more than ever they are attached. In these concepts, there is a kind of valentine society from generation to generation, is under way and people. Interest and interest components that work ethic is an important component in the past, was seen in a variety of work-related oral literature. Perhaps one of the manifestations of it can be found in work-songs. Music and song includes the lyrics that people read the work (Zolfaghari, 2009).

The context of human research so continuing to investigate the impact of the human factor is widespread. Barati et al (2010) conducted a study on "The relationship between climate and conscience to do with job performance" did the results of path analysis showed that the cooperative atmosphere and innovative atmosphere reliability directly but indirectly to job performance their nose. The results of this study were: consciousness affects job performance. The positive climate could increase this effect. Thus, organizations and managers can evaluate the personality traits of their employees, especially their consciousness, to create a positive atmosphere in the organization use. Archana study (2004) showed that social support and control as well as job stress and there is consciousness. This means that people with high consciousness always concerned with work, job and their duties are correct. This mainly concerns and how supervision and discipline of the society and the organization of individual stems.

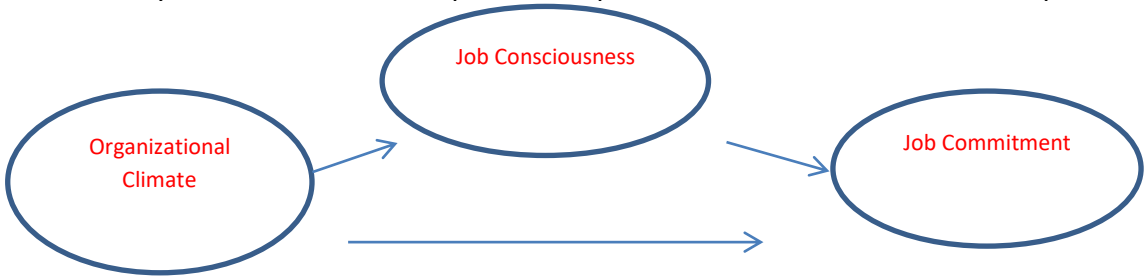
Since the objective of this study was to investigate the role of mediator in the relationship between climate and organizational commitment is job consciousness in Figure (1) the basic model of the relationship between variables is given. For this purpose, the theoretical assumption as the model assumed that after evaluating the relationships among the variables, parameters, and finally model is estimated:

Figure1. Theoretical and Conceptual Model of the Relationship between Variables

Methods

The study is a correlation study conducted by stepwise regression analysis and path analysis were used. The population in this study were all 397 employees Azad University of Yazd in 2013, the 195 subjects were randomly selected and classified in accordance with the proportion of the population, were surveyed. In order to collect information on the main variables in this study, questionnaires were used as follows:

1. In the case of climate variables: organizational climate questionnaire Halpin and Croft. Eight behavioral dimensions of organizational climate questionnaire that staff and managers, including team spirit, harassment, interest, intimacy, observant, getting away, the influence and dynamism and the emphasis on production is in the back. The questionnaire was



standardized in 1995 by Doshmanziare and its validity is confirmed (Rostamkolai et al., 2013); Faghihi (2012) as: "The relationship between climate and organizational commitment among female primary school teachers Varamin city" of Cronbach's alpha was calculated for 0.81 reliability climate.
2. For variable organizational commitment, organizational commitment of Allen and Meyer questionnaire. The questionnaire includes 24 questions on three dimensions of organizational commitment standards and affective commitment, continuous commitment and normative commitment or duty. Organizational commitment questionnaire has been a standard and reliable and have been used by local researchers and its validity and reliability have been measured (Rostamkolai et al., 2013); Seidameri and Esmaeeli research (2009) entitled: "The relationship between empowerment, organizational commitment, and job commitment Physical Education Department of Tehran Province" the questionnaire reliability through Cronbach's alpha coefficient was estimated the value of 0.83.
3. In order to determine the variable job consciousness: questionnaire design conscience by Iraj Soltani. The validity of the internal control tools in research and has been approved by experts. In a study titled, "The effect of transformational leadership style of leadership and engagement on the consciousness of teachers" Hassanzadeh et al. (2010) Inter-rater reliability of the questionnaire through Cronbach's alpha coefficient was estimated the value of 0.80.

To organize and summarize the data descriptive statistics (Mean, Standard Deviation and so on) was used to examine the relationship between variables in inferential statistics stepwise regression was used. Then researchers through Structural Equation Modeling and pattern using the EQS software to review and validate the proposed model and analysis of the issue.

Results

The sample consisted of 195, 133 men (equivalent to 2.68%) and 62 women (at 31.8 %). Furthermore, as a field of activity, number 60 in the area of financial administration (30.8 %), 18 educational affairs (2.9 %) of 31 patients (15.9%) and 22 student affairs (11.3 %), 6 construction (1.3 %), 3 culture (5.1 %), 16 School of Medicine (2.8%), the university hospital 34 patients (17.4
%) and 5 of Prefecture (6.2 %) were selected. In terms of employment status, the number 167 (the equivalent of 6.85 %) officially and 28 (at 14.4 percent) were in the form of a treaty. The number and proportion of the respective proportions of the study population were just like. The most appropriate

statistical model to test and verify the hypothesis of this study, stepwise regression analysis and path analysis test was considered. The values in Table 1 showed that the job consciousness with organizational climate (p <0/01, r = 0/72) as well as job commitment (p <0/01, r = 0/8) has a significant positive relationship. In addition, between organizational climate and job commitment (p <0/01, r = 0/91) is also a significant positive correlation.

Table1. The Mean, Standard Deviation and Internal Correlation between variables

Row	*Variables*	*Mean*	*Standard deviation*	*1*	*2*
1	Job consciousness	161/67	68/5	-	
2	Organizational climate	72/83	24/37	0/72*	-
3	Job Commitment	77/6	30/67	0/8*	0/91*

*p<0/01

In Table 2, we see that the organizational climate standard Beta coefficient equal to 0/91, % 82/8 of the variance of job consciousness is explained. Job conscious and organizational climate respectively, with standard Beta coefficients equal to 0/69 and 0/3, % 87/1 of the variance in job commitment has been explained.

Table2. The results of Structural Equation Modeling

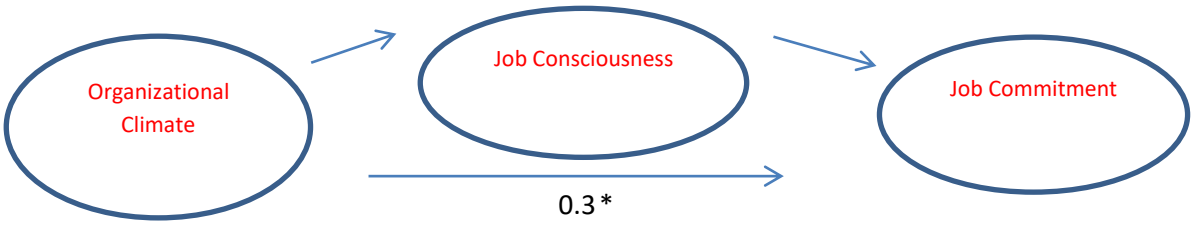
Row	*Pathways final model*	*B*	*SE*	*β*	R^2	x^2	*GFI*	*RMR*	*NFI*	*IFI*	*CFI*	*RMSEA*
1	Job cons → Org clim	0/407*	0/13	0/91*	0/828	-	-	-	-	-	-	-
2	Job comm→ Job cons	0/311*	0/17	0/69*	0/871	0	0/94	0/006	0/93	0/92	0/97	0/078
3	Job comm→ Org clim	0/377*	0/47	0/3*								

*p<0/01

Based on these data and the results of them can be the ultimate pattern research of the relationship between the variables that confirms the hypothesis put forward in this study can also be traced to the following and complete:

(82/8)

0.91* 0.69* (87/1)



*p<0/01

Figure.2 Final communication variables model

In the next column of Table 2 shows that Chi-square fit model, along with other indicators are desirable. It should be noted, in the structural equation model, the Chi-square and indicators fitted to determine the status (approval or disapproval) will be the ultimate model. In this type of analysis is required, a non-significant Chi-square and indicators such as measures of Goodness of Fit Index (GFI), the Comparative Fit Index (CFI), Normative Fit Index (NFI) and Incremental Fit Index (IFI) when the upper 0/9 they are indicative of the desirability of the model. Root Mean Square Error of Approximation (RMSEA) as well as closer to zero indicates a desirable example. In addition, the indicators obtained from ideal conditions are present for the final research model.

Discussion and Conclusion

To achieve the purposes of this research and theoretical and experimental background according to the model were proposed with the simulator using path analysis. The researches of Saeedian and Moradi (9002); Barati et al (2010) instead of optical, as well as Mahdad et al (2012); Jackson (1999) and Archana (2004) in terms of their findings as a result of coordination with the main hypothesis of this plan, namely the existence of an intermediary role of conscience in the relationship between organizational climate and organizational commitment in Yazd Islamic Azad University employees. People with high job consciousness always concerned with work, job and their duties are correct. This concerns mainly the amount and manner of supervision and discipline of the society and the organization of individual stems. Job consciousness affects job performance. Also positive organizational climate may increase this effect. Thus, organizations and managers can assess the personality traits of their employees, especially their job consciousness, their organization in order to create a positive atmosphere. The organization includes many things are important for the organization's ethical climate and ethical behavior of employees is effective. Ethical climate of the organization include the perception of right and wrong in the work environment and organizational behavior norms for acceptance and rejection of the offer.

The second result of the project that there is a significant relationship between organizational climate and employee commitment to the organization in the Yazd Islamic Azad University, with findings from research Ghaseminejad and Siadat (2004); Noorbakhsh and Mirnadri (2005); Fooladvand(2007); Barati et al. (2010); Faghihi (2012); Mahdad et al (2012); Sistrunk (1989); Jackson (1999); Goleman et al (2001); Morris and Bloom (2002); Kick et al (2006); Ertürk (2007) and Chen and Chiu (2007) are the alignment and coordination. Organizational climate, organizational structure is considered to be objective. Since the members of the organization share common structural features, find common understanding that organizational climate forms. Several studies show that policies, programs and financial position of any organization suitable working environment does not become, but what the organization an ideal working environment makes employees feel about the workplace. The

organizational climate is the same as the air in a room, we can not see or touch the organizational climate, but it surrounds us and everything that happens to affect and also of what is going on in the organization, the impact of accepts. Therefore, any organization, culture, traditions and special methods of operation on the make up of its atmosphere. Some organizations working atmosphere is dynamic and tolerant of others and some human and some are quite hard and cold. In the openness and good atmosphere, staff, job satisfaction and motivation are significant enough to overcome their problems. They have a driving force for organizing and keeping things moving organization. In addition, employees are proud to work with your organization. Staff working well with each other and the whole organization is doing. Organizational climate relates to determine measurable features a work environment that is directly or indirectly by those who work in this environment is perceived and assumes that the impulse and affect behavior, also the most effective and influential source for shaping the behaviour of acts. Organizational climate can be the result of leadership as manager. Effective management skills in motivating employees to meet the psychological needs of employees as a great achievement, power, etc. All of these factors contributes to the efficiency and effectiveness of staff and ultimately improve the efficiency and effectiveness of the organization.

In this study, was determined that the level of conscience of job commitment towards working for the organization in Yazd Islamic Azad University personnel is needed, because according to the data obtained between conscience and career commitment to the organization in Yazd Islamic Azad University personnel as well as a significant positive relationship is established. The results of the researches, Babaei and Momeni (2006); Saeidian and Moradi (2009); Barati et al (2010); Faghihi (2012); Archana (2004) are coordinated in some way with these findings. Human resources are the most important asset of any organization. Review and identify factors associated with those resources that can be found on the importance of effective organizational performance is becoming increasingly important. Improving job performance is one of the most important targets that are in the Organization managers because the upgrade provides productivity in society and promotion of the national economy and upgrading the quality of service and production organization will be. Job performance of the duties of the job he is doing. The performance of the activities have been defined, which is typically part of the job and the person's activities and should do it. The basic factors of the person's desire and ability in the performance and productivity of the individual have been introduced. In this way, the job conscience causes is in order and a sense of duty will be in people. Taking the concept of consciousness in organizations, according to ethics and human relations, because the ethics creating commitment and cause people to job duties and their behavior in the best shape and there are no external control of critical factors. The existence of job consciousness in an organization will increase productivity, sustainable development, human cultural development, management stability and economic order. Taking the concept of ethical and human consciousness in organizations actually look at the issue of work and organization. For professional ethical behavior leads to a commitment to duties in the best way and without external control, followed by improved results, to improve the community, inner satisfaction and peace of mind is one's conscience.

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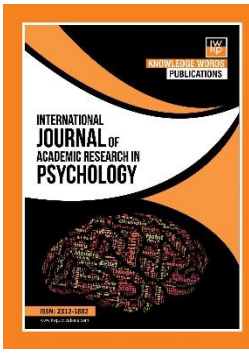

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Parents' Perception of the Causes and Effects of Child Abuse in Ondo State, Nigeria

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Abstract
The study examined the causes and effects of child abuse as perceived by parents in Ondo State. The population for the study comprised every parent within the state. From the population, 200 respondents were sampled using purposive sampling technique. The samples were further stratified on the basis of gender, educational status and residence. Data were collected using a researcher designed questionnaire titled Child Abuse Questionnaire (CAQ). The instrument was found valid and reliable with reliability coefficient of 0.79. Data collected were analyzed using percentages and t-test. Based on the findings, parents identified poverty, marital crises, and illiteracy as the main causes of child abuse. Among the identified effects of child abuse are school dropout, poor academic performance, sexual assaults and emotional breakdown. However, significant differences were found in parents' expressed causes of child abuse on the basis of educational status and residence but parents' expressed causes of child abuse did not significantly differ on the basis of gender. On the other hand parents' expressed effects of child abuse also differed, significantly on the basis of educational status and residence but not on gender. It was therefore concluded that parents' perceptions of causes and effects of child abuse greatly depended on their educational status and residence. Based on these findings, it was recommended that policy makers should come up with more enlighten programmes on effects of child abuse for parents in rural and urban areas.
Keywords: Child, Child Abuse, Educated, Illiterate Parents, Rural and Urban Residence.

Introduction

Around the world, children are identified as asset. Parents, government and non-governmental bodies work towards making their living free of cultural and economic huddles. From the time of its establishment, the United Nations Organization has been showing interest in children and trying to solve all forms of problems associating with their life. The need to make children living free of problems, national and international bodies do establishes agencies that are solely concerned with solving children problems. For example at the end of 1946, the United Nation Organization established the International Children Emergency fund (UNICEF) to cater for children in war turned

areas. However, the intensified social crisis around the world brought about enlargement and permanency of the scope of UNICEF. Since 1953, UNICEF has been providing children throughout the world with food, clothing and medical care and has been trying to ease out children that are hooked by cultural practices that subject them to different abuse.

Child abuse is the physical, sexual or emotional mistreatment of children. It is all form of social and cultural practices that subject children to humiliation, and emotional breakdown. Because of economic crises that now pervade the world, children now face high incidence of abuse (Welesh, 2000). According to the National Committee to Prevent Child Abuse, in 1997, neglect represented 54% of confirmed cases of child abuse, physical abuse 22%, sexual abuse 8% emotional maltreatment 8% and other forms of maltreatment 12%. Child abuse is not a good experience. It is one experience that can hamper child's life biologically, emotionally, psychologically, and educationally. Yet despite the international outcry on the evils of child abuse much has not been achieved at eradicating it. One reason for this is what Welesh (2000) called inadequate information and understanding of the acts. Welesh (2000) claimed that little is known about what child care stakeholders perceived as chid labour. Many even believe that child abuse is not as serious as the world child protection organizations claimed it is. Because child abuse is relatively perpetrated in cultural settings, human attitude towards it and people's perceptions about its causes and effects can vary.

Adeojo (2008) writes that different social jurisdiction have developed their own definitions of what constitutes child abuse for the purposes of removing a child from his/her family and/or prosecuting a criminal charge. According to the journal of child abuse and neglect, child abuse is 'any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or sexual abuse or exploitation, an act or failure to act which presents and imminent risk of serious harm to a child.

Internationally, child abuse is seen as all form of injustice that enslaves a child or takes advantage of children's naïve nature or ignorance to enrich socially and economically the adult folk. Child abuse is when the life of the child is in danger or when the maltreatment can result in fatality. Every child around the world is entitled to good education. The education is expected to be free, compulsory and universal. It is in furtherance of this that national and international governments are encouraged to provide human and non-human facilities that will make education available to all irrespective of the gender, the ethnic, residence and religion of the child (Little, 1997). Elebu (1990) is of the opinion that the first care that a child can receive from his/her parent is to be educated and be socialized to become relevant in his/her society. When a child is denied this first opportunity, his chance of getting it remedied when grown up is almost zero. One thing about education as the first right of a child is that when a child is not educated he can become vulnerable to other future life of maltreatment.

In Nigeria, there are laws that make it a punishable offence for parents who refuse to send their children to school to receive basic education. Such parent is fined and subsequently sentenced to imprisonment terms depending on the gravity and severalty of the offence (FGN, 2006). In 1990, delegates from 155 countries as well as representatives from 150 organizations had agreed at the World Conference on Education for All (EFA) in Jomitien, Thailand to provide basic education to all, irrespective of social background, by the year 2005 (later shifted to 2015); particularly to girls, children in difficult circumstances and those belonging to ethnic minorities. Nations agreed to provide easy access to and complete free and compulsory primary education (Kisseka, 1981).

Child abuse is a serious problem that can render a child to develop haphazardly, emotionally and academically. International organizations have expressed concerns about child abuse and have proved that abused children lack the potentials to contribute to the development of his or her society. The results of being abused as a child vary according to the severity of the abuse and the surrounding environment of the child. If the social environment of the family or school is nurturing and supportive, the child will probably have a better outcome. Child abuse is itself a disservice to child's upbringing. Parents are expected to show love and care towards their children and they are expected to provide enabling environment that will aid their children to develop self-confidence.

Ebigbo (1989) opines that physical abuse may result in difficulty establishing intimate personal relationships, difficulty in adulthood it physical closeness, touching, intimacy or trust and high levels of anxiety, depression, substance abuse, medical illness or problems at school or work. The inadequacy of information on the causes and effects of child abuse around the world justify the need for this study. Many are yet to be done in understanding what parents in particular expressed as causes and effects of child abuse in Ondo State. Thus, this study was carried out in order to find out parents' perceptions about causes and effects of child abuse on the bases of gender, residence and educational status.

Purpose of the Study

The purpose of this study is to find out parents' expressed causes and effect of child abuse in Ondo State. Specifically, the study find out:

1. whether parent's expressed causes of child abuse vary on the basis of gender
2. whether parents' expressed causes of child abuse vary on the basis of residence.
3. whether parents' expressed causes of child abuse vary on the basis of educational level.
4. whether parents' expressed effects of child abuse vary on the basis of gender.
5. whether parents' expressed effects of child abuse vary on the basis of residence.
6. whether parents' expressed effects of child abuse vary on the basis of educational level.

Research Questions

For the purpose of this study, the following research questions were raised and some answered or transformed to hypotheses and tested in this study.

1. Do parents expressed causes of child abuse vary on the basis of gender?
2. Do parents expressed causes of child abuse vary on the basis of residence?
3. Do parent's expressed causes of child abuse vary on the basis educational level?
4. Do parents' expressed effects of child abuse vary on the basis of gender?
5. Do parents' expressed effects of child abuse vary on the basis of residence?
6. Do parents' expressed effects of child abuse vary on the basis of educational level?
7.

Research Hypotheses

The following research null hypotheses were raised and tested in the study.

H_{O1}: Parents' expressed causes of child abuse does not significantly vary on the basis of gender in Ondo state.

H_{O2}: Parents' expressed causes of child abuse does not significantly vary on the basis of residence in Ondo state.

H_{O3}: Parents' expressed causes of child abuse does not significantly vary on the basis of educational level in Ondo state.

H_{O4}: Parents' expressed effect of child abuse does not significantly vary on the basis of gender in Ondo state.

H_{O5}: Parents' expressed effect of child abuse does not significantly vary on the basis of residence in Ondo state.

H_{O6}: Parents' expressed effect of child abuse does not significantly vary on the basis of educational level in Ondo state.

Scope of the Study

The study is limited to Ondo State. There are eighteen local governments in the state. However, samples were drawn from only five (5) Local Government Areas comprising rural and urban settlements of the LGA.

Methodology

The study employed descriptive research survey method. The use of the descriptive research survey method allowed the researcher to collect relevant data relating to child abuse from relatively large sample representing parents in Ondo State. The population for the study consisted of every parents in Ondo state, Nigeria comprising two urban and two rural areas settlements in the LGAs selected. From the population, purposive sampling technique was used to sample a total of 200 parents across the four settlements. The sampled parents were further stratified on the basis of gender, educational status, and residence. This sampling technique gave the research adequate coverage of the studied population.

The instrument used for data collection was a research-made questionnaire titled Child Abuse Questionnaire (CAQ). The instrument has three sections. Section 'A' elicited information on respondents' biographical data such as gender, educational status and residence. Respondents' responses to items in this section were used in stratifying the sample into the referred strata. The Section 'B' has fifteen (15) items in each of the two parts. Respondents were asked to identify specific causes of child abuse in the part one and specific effects of child abuse in the part two. The Section 'C' has fifteen (15) items eliciting respondent's perceived consequences of child abuse. Each of the items has response options ranging from Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

The instrument was validated using face and content validity approaches. The corrections suggested by the experts were effected on the final draft of the instrument before it was administered on the respondents. The instrument was tested for reliability using test-re-test approach. Using this procedure, the researcher administered the instrument twice at an interval of three weeks on sub-sample of the study. The two sets of scores derived from the two-time administration of the instrument were correlated using Pearson Moment Correlation Coefficient statistic (r). Through this process, a reliability coefficient of 0.79 was derived and this was adjudged as good enough in making the instrument reliable for the study. Data collected were analyzed using descriptive statistic and t-test analysis.

Results

Table 1: Description of the sampled respondents on the basis of demographical variables

Gender				Residence				Educational Status			
M		F		Rural		Urban		Literate		Illiterate	
n	%	n	%	N	%	n	%	n	%	n	%
111	55.5	44.5	100	50	100	50	100	105	52.5	95	47.5

As shown on Table 1, out of the sampled respondents, 111(55.5) were male parents and 89 (44.5) were female parents. Also, 100 (50%) were sampled from rural settlements and another 100 (50%) were sampled from urban settlement. Out of the sampled parents, 105(52.5%) were educated and the remaining 95(47.5%) were illiterate.

Hypotheses Testing

H_{O1}: Parents' expressed causes of child labour do not significantly vary on the basis of gender in Ondo state.

Table 2: T-test of Difference in Parents' Expressed Causes of Child Labour

Variables	n	X	SD	df	t-cal value	t- table value
Male	111	50.69	14.63			
				198	1.57	1.96
Female	89	50.73	14.54			

As indicated on Table 2, the t-test calculated value (1.57) is less than the t-test table value (1.96) thus, hypothesis one was accepted and it was concluded that parents' expressed causes of child labour does not significantly vary on the basis of gender.

H_{O2}: Parents' expressed causes of child labour do not significantly vary on the basis of residence in Ondo state.

Table 3: T-test of Difference in Parents' Expressed Causes of Child Labour

Variables	n	X	SD	df	t- cal value	t- table value
Rural	100	36.27	12.11			
				198	2.42	1.96
Urban	100	52.55	15.35			

$p > 0.05$

On Table 3 the t-tests calculated value, (2.42) is higher than the t-test table value (1.96) thus the hypothesis two was rejected and it was concluded that what parents in rural and urban center perceived as causes of child labour significantly differ.

H_{O3}: Parents' expressed causes of child labour do not significantly vary on the basis of educational status in Ondo state.

Table 4: T-test difference in Parents' Expressed Causes of Child Labour

Variables	n	X	SD	df	t- cal value	t-table value
Literate	105	45.27	11.26			
				198	2.03	1.96
Illiterate	94	33.33	13.21			

p > 0.05

On Table 4, the t-test table value (1.96) was less than the t-test calculated value (2.03) thus. Hypothesis three was rejected and it was concluded that significant difference existed in literate and illiterates parents' expressed caused of child labour in Ondo State.

H_{O4}: Parents' expressed effects of child labour do not significantly vary on the basis of gender in Ondo state

Table 5: T-test of difference in Parents' Expressed Effects of Child Labour

Variables	n	X	SD	df	t- cal value	t- table value
Male	111	43.69	12.52			
				198	2.00	1.96
Female	89	61.37	14.41			

p > 0.05

Data on Table 5 showed that the t-test calculated value is higher than the t-test table value thus, hypothesis four was rejected and it was concluded that parents' expressed effects of child labour significantly varied on the basis of gender.

H_{O5}: Parents' expressed effect of child labour do not significantly vary on the basis of residence in Ondo state.

Table 6: T-test of Difference in Parents' Expressed Effects of Child Labour

Variables	n	X	SD	df	t-cal value	t-table value
Rural	100	55.10	13.15			
				198	2.11	1.96
Urban	100	47.22	14.20			

p > 0.05

On Table 6, the t-test calculated value, (2.11) is higher than the t-test table value (1.96). Thus, hypothesis five was rejected and it was concluded that parents in rural and urban centers have different perceptions on the effects of child labour in Ondo state.

H_{O6}: Parents' expressed effects of child labour do not significantly vary on the basis of educational status in Ondo state.

Table 7: T-test of Difference in Parents' Expressed Effects of Child Labour

Variables	n	X	SD	df	t- cal value	t- table value
Literate	105	54.43	14.34			
				198	2.41	1.96
Illiterate	94	65.22	13.40			

p > 0.05

On Table 7, the t-test table value (1.96) was less than the t-test calculated value (2.41). Thus, hypothesis six was rejected and it was concluded that significant difference existed in literate and illiterate parents' expressed effects of child labour in Ondo State.

Discussion

Child abuse is an international crisis. It is one major social problem that affects family life and subsequently, national development. Around the world, in the year 2003, 906 children were estimated to be victims of child abuse or neglect (Berlin, 2004). Child abuse is a serious vice that now affects child development across the world. It is one evil that nations have been striving to correct.

There are different types of child abuse, however, in this study, the researcher focused on physical abuse, sexual abuse, emotional abuse and neglect. On this base, the researcher find out what factors contribute to the perpetration of these series of abuse on children and the consequences the abuse may have on the children. Thus, the study found out that one major cause of child abuse is lack of parental knowledge on what constitute child abuse. It was found out that many parents do not really know what act of theirs result in child abuse. Because of parenting style often adopted by many parents and because many parents believe they have the right of discipline their children through any means, they hardly believe that their action constitute child abuse. Thus, a parent that beat his child at home because of child disobedience or the one that give the child a duty as punishment may not really know when such punishment get out of hand since such parent may have preoccupied his/her mind that as a parent he/she has the full unchallengeable right to discipline his/her child.

The findings was buttressed by Adeojo (2008) who points out that parents are the major child abuser because parents often erroneously believe as parents they have unlimited duty of discipline their children. Neglect was found among the major common type of child abuse perpetrated by parents on their children. Neglect is a failure to provide for the child's basic needs. The types of neglect are physical neglect, educational neglect and emotional neglect. Physical neglect is when a parent failed to provide for a child's physical needs which may include inadequate provision of food, housing or clothing, lack of behavioural supervision, expulsion from the home or refusal to allow a runaway to return home. Others are abandonment, denial of medical care and inadequate hygiene. Looking at these series of mentioned types of physical child abuse, one will see that base on ignorance or gross inadequate knowledge of what constitute child abuse, a parent can inflict any of the abuse on the child without knowing he is abusing the child.

On the other hand, some hypotheses were tested to find out whether parents perception on the causes of child abuse will differ and the following were found: Male and female parents' perceived causes of child labour in Ondo State did not differ significantly. However, significant difference was found in parents' perceived causes of child labour on the basis of residence. Also,

literate and illiterate parents' perceived causes of child labour significantly differed. However, sampled parents' perceived causes of child labour did not significantly differ on the basis of religion.

The implications of the findings through the tested hypotheses are parents residence can influence what they perceive as causes and consequences of child abuse. Thus, a parent in rural area may have a different opinion from those in urban center. There is no doubt that human's knowledge on social issue can depend on where the parent live (Benjamin, 2000). Human residence can go a long way to determine the volume and quality of social information a parent can have access to and such information can form the attitude of the parent towards child abuse.

One main effect of child abuse as identified in this study is breakdown in child's emotional development. A child exposed to series of child abuse can grow up to lose self-confidence and may grow up to have emotional disorder. This finding was in line with that of Tentra (2009) findings in a research he conducted in Boston. Tentra found out that children that grew up and abused were found to be emotionally weak than those that grew in loving and abuse-free environment.

Conclusion

Generally, child abuse is an international enemy of child development. Around the world, child abuse is said to account for child mortality, and derailment in child's educational progress. Importantly, it was found that what male and female parents perceived as effects of child labour significantly differed. Parents tend to abuse their children or ward because of stress the parents themselves face. Such stress may emanate from parental work experiences, financial incapability or marital disappointment. In such situation, the parents may vent their annoyance on their children. Parents and child guidance that abuse children tend to be socially isolated themselves. Few violent parents belong to any community organizations and most have little contact with friends or relatives. This lack of social involvement deprives abusive parents of support systems that would help them deal better with social or family stress. Moreover, the lack of community contacts makes these parents less likely to change their behaviour to conform to community values and standards.

Recommendation

Based on the findings discussed above, the following recommendations were made:

1. Parents and child care givers should be further oriented on using better parenting style that will not subject children to any type of child abuse. In addition to this, they should be educated about what can constitute child abuse in their effort to discipline their children.
2. Government and other stakeholders should come up with more social policies that will prevent all forms of child abuse at home and in schools. Such policy should be designed in a way that will be criminal to subject any child to abuse. In addition to this parents and other child care givers should be made aware of the policies.
3. Efforts should be made to educate parents in rural areas on what constitute child abuse. Such orientations should keep the parents informed that activities like hawking, school enrolment delay and early marriage are forms of child abuse.

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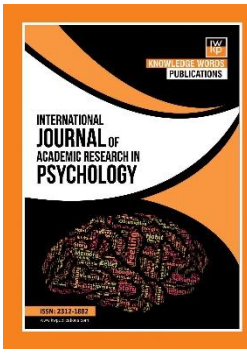

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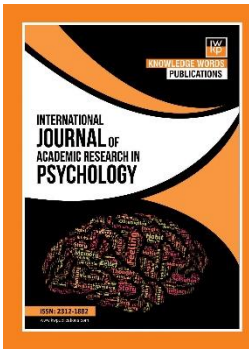
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Relationship among Maltreatment Factors, PTSD Symptoms and Coping Strategies

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Abstract
There are hoisted rates of infancy abuse and posttraumatic stress disorder (PTSD) symptoms in abused females of shelter homes and old age homes. The current research intends to investigate the association among maltreatment factors, PTSD symptomatology and coping strategies. A survey research design was used in the study. The sample consisted of 150 participants, selected through purposive sampling technique.
Childhood trauma questionnaire (Bernstein & Fink 1998), Davidson trauma scales (Davidson, 2003) and Brief cope scale (Carver, 1997) was used to assess the maltreatment factors, PTSD symptoms and coping strategies respectively. Descriptive statistics, correlation, One way ANOVA and Independent sample t-test were used to examine the data.
Results recommended significant relationship among maltreatment factors and PTSD symptomatology. Findings demonstrated a positive correlation between coping strategies and maltreatment factors. Results also indicated significant differences in relation to marital status, qualification, residence, area, and organizations. These findings postulated that childhood maltreatment is associated with the psychological disorder of PTSD symptomatology of re – experiencing, avoidance or numbness and hyper-arousal and the maltreated women must use coping strategies after the abusive and neglected behavior. Findings suggest that child maltreatment is a predisposing feature for undesirable health effects in subsequent life and that coping strategies are critical components in this relationship. Suggestions for clinicians, medicinal experts, and specialists are examined.
Keywords: Maltreatment, PTSD, Coping Strategies, Shelter Homes, Old Age Homes.

Introduction

Childhood Maltreatment

Newspapers in 1876 tell the story of Mary Ellen Wilson, the first child in the United States

being secured from an abusive situation. The first academic paper on child maltreatment was not published until 1962, after six years of Mary Ellen's death. The paper of Kemp in 1962 on Battered child syndrome introduces the new way for the study of child maltreatment and its results (Higgins, 2004). The Child Abuse Prevention and Treatment Act (CAPTA) passed in 1974. CAPTA devised broad legal definitions of child maltreatment, around physical and emotional harm, parental neglect and other harmful factors 0f children's development (National Research Council, 1993; U.S. Department of Health and Human Services, 2005).

Maltreatment is defined as "actions that are abusive, neglectful or otherwise intimidating to the benefits of a child" (APA Committee on Professional Practice and Standards, 1998).

APA (1998) describes physical abuse as "the distress by a child and wide risk in which a child will suddenly suffer, a physical harm, imposed non-accidentally upon her/him by her/his parents or guardian "Sexual abuse is defined as "links between a child, an adult and another person significantly older or in a position of power or control on the child, where the child being used for sexual motivation of the adult or another person,"

Psychological neglect characterized as a rehashed model of conduct that express to kids that they are valueless, undesirable or just of worth in addressing another's necessities; may incorporate genuine dangers of physical and mental viciousness. Physical neglect is defined as "a child suffering from, or in substantial risk of physical harm causing defect, impairment of bodily functioning, or other serious physical injury as a result of situation created by a parent and other persons legally liable for the child's welfare, or by the failure of a parent or person legally responsible for the child's welfare to adequately supervise or protect him/her" (APA Committee on Professional Practice and Standards, 1998).

Neglect defined as "a lapse of care rather the charge of harm. Neglect has typically been identified through parent behavior or child experiences, which may change depending on developmental level and needs of the child (Dunn, 2002; & Schumacher, et.al, 2001).

Emotional neglect includes an inability to give encouragement that must be given by near and dear ones. Consequently, it is imagined that a guardian psychologically ignores a child when he did not show up with love (Psychology Today Sussex Publishers).

PTSD Symptomatology

PTSD symptoms are that occurs in the result of maltreatment and abusive behavior. PTSD is characterized by the persistent experiencing of highly disturbing psychological symptoms that occur in reaction to trauma. DSM-V describes psychological symptoms associated with PTSD generally fall into three categories re-experiencing trauma (e.g. nightmares, flashbacks, or intrusive or recurrent thoughts), emotional avoidance (e.g. emotional numbing, avoidance of immediate stimuli, emotional numbing), and increased arousal (e.g., hyper vigilance, sleep disturbances, poor concentration).

PTSD and chronic traumatization although the majority of the PTSD literature focuses primarily on individuals exposed to a specific, identifiable, one-time traumatic event, research has also started to examine the lasting impact of multi-time traumatic exposure, also known as chronic traumatization.

Coping

Coping strategies are "the coping style of a participant in stress situation" (Carver & Scheier, 1981).

Three coping strategies were used in this study, problem-focused coping, and emotion-focused coping and dysfunctional coping. Coping broadly defined as "relatively stable cognitive and behavioral techniques employed in an order to manage environmental stressors", (Moos & Holahan, 2003). Generally speaking, coping involves both relatively stable styles and dispositions that depict an individual's characteristic ways of interacting with their environments in addition to the cognitive and behavioral responses or skills that they utilize to manage stressful encounters, (Moos & Holahan, 2003). Coping involves biological, behavioral, cognitive, emotional, and social levels (Pearlin & Schooler, 1978) and the coping strategies that any given individual utilizes rely on situational demands, (Folkman & Gruen et al., 1986).

Some researchers characterized coping as falling into two discrete categories: problem-focused coping and emotion-focused coping (Folkman & Lazarus, 1980; Folkman, & Moskowitz, 2004; Lazarus & Folkman, 1987). Problem-focused coping is defined as modifying the problematic person-environment relationship. This type of coping includes engaging in effective, positive, purposeful, and adaptive, strategies that employ behavioral and cognitive techniques in an effort to actively alter the course of stress (e.g. seeking treatment or utilizing resources). On the contrary, emotion-focused coping refers to passive coping that involves utilizing negative, maladaptive, strategies that employ behavioral and cognitive techniques aimed at reducing emotional stress (e.g. avoidance, & engaging in harmful behaviors) (Carver & Scheier et al., 1989; Folkman & Lazarus, 1980; Folkman & Moskowitz, 2004; Moos & Holahan, 2003).

More recently, it has been argued that the long-standing and extensively used categorization of coping strategies into problem-focused and emotion-focused could be expanded to include meaning-focused coping (Folkman & Moskowitz, 2004), "a process of utilizing values and beliefs to modify the subjective meaning of stressful events, particularly those that are chronic or unavoidable", (Park & Folkman, 1997).

Other investigations have conceptualized coping as either adaptive or maladaptive. Maladaptive coping is more often compared to emotion-focused coping and aims to diminish immediate anxiety but disturbs the later quality of life (Carver 1989). Examples of maladaptive coping include avoidance, venting, denial, and substance use, (Moos & Schaefer., 1993). However, it should be noted though that although certain approaches are categorized as

"Maladaptive, these strategies may be adaptive for specific individuals or under certain circumstances. Adaptive coping, on the other hand, is similar to problem-focused coping and is designed to manage stress or solve a problem by eliminating or eradicating the stressor. (Dakof & Taylor, 1990).

Evidence suggests that in high threat situations, both adaptive and maladaptive coping approaches are often engaged (Rippetoe & Rogers, 1987). The literature does support the concept that a distinction exists between the effectiveness of each coping style with regard to future adjustment and psychological well-being. For example, research showed poorer adjustment was associated with specific forms of maladaptive coping including denial and avoidance (Carver et al., 1993).

Literature Review

Michelle, Terri & David et al (2009) Childhood sexual abuse (CSA) has reliability been associated with the avoidant coping behavior, these coping methods and maltreatment factors tend to have a link with trauma symptoms which also linked to increasing the risk of adult sexual re-

victimization. The purpose of this study was to test a model that based on the relationships among these variables. This model was tested in a cross-sectional study on a 99 females undergraduate college students having experienced CSA, who completed measures of abuse history, coping style, current levels of trauma symptoms and adult sexual re-victimization. Findings from this study suggested increased CSA severity has a link with avoidant coping which turn in greater levels of trauma symptoms while coping strategies and trauma and trauma symptoms were effective factors that place women at increased risk for coercive sexual re-victimization.

Tami & Sullivan et al (1995) utilized path modeling to survey (a) the impact of youngster maltreatment on females' utilization of hostility and their encounters of being abused, (b) the relationship of these three variables to depressive and posttraumatic stress signs, and (c) the circuitous pathways from females confronting viciousness and their being abused to mental manifestations through escaping . Ladies' utilization of viciousness did not straightforwardly or by implication foresee symptomatology. Conversely, youngster misuse and ladies' encounters of being exploited were prescient of both depressive and posttraumatic stress manifestations, and being defrauded additionally were connected in a roundabout way to depressive side effects through avoidance coping.

Foster (2014) the study based on the experience of trauma among young adult college students that associated with symptoms of anxiety. Not only symptoms of anxiety associated to any trauma but sometimes there is a relationship were also found between individual level of coping either using adaptive coping rather than to maladaptive coping. Research has examined the interrelationship between the experience of trauma, specific types of coping and anxiety symptoms. A sample of 915 undergraduate students was selected. Results postulated that maladaptive coping, but not adaptive coping was a mediator of the association between the experience of trauma and symptoms of anxiety.

Walsh & Fortier et al (2009) research in which coping was an important element to understand the long-term functioning of maltreated individuals such as sexual abuse. Research first examined the relation of coping theories with trauma and then examined that how these theories have been applied to studies of coping in sample of sexual abused individuals thirty nine studies were reviewed in which eleven descriptive studies with the history of sexually abuse, eighteen based on the relationship between coping strategies and ten investigated coping as meditational factors in relation to long term outcomes. These studies provide information that early sexual abuse relates to coping strategies.

Rational of the Study

The present study was conducted to find out the relationship among maltreatment factors, PTSD symptomatology and coping strategies in maltreated women. In Pakistan, different kinds of maltreatment has been increased alarmingly during the running years. These forms of maltreatment are associated with distinct, as well as shared, consequences. It was assumed that increased exposure to abuse increase the likelihood that the survivor will engage in coping strategies. In Pakistan there was numerous research on child maltreatment but not on maltreated women. This study investigated the childhood maltreatment and PTSD symptomatology in females. This research further examined the type of coping strategies used by maltreated women. PTSD symptoms occur due to maltreatment

that result in maladaptive coping. All forms of maltreatment are associated with developmental delays, health problem, and psychological disorders specially PTSD symptoms.

Theoretical Framework

Cognitive theories of PTSD based on memory models that define traumatic memories. According to these model in there are two memories one is an individual memory and other standard memories. Brewin, (2000) model in which a Dual depicted hypothesis based on 7 traumatic memories. In this model, two memories are parallel in capacity and one dominates the other on time. One framework is personal memory (verbal memory) based on recollections of traumatic events and second on the natural based on situational signals. In this framework the traumatic memory associated with other self-portraying recollections, it can be fully recovered when required and feelings also occur by the subjective exposure of those traumatic events.

Ehlers and Clark, (1999) postulate that while anxiety, in general, is a result of appraisals of an approaching threat; PTSD involves anxiety about the future although the traumatic event leading to PTSD already has happened. They recommended that traumatic events will give rise to PTSD when individuals process information from the event in a way that leads to a sense of current threat. The model emphasizes the way in which stimulus are practice during trauma.

Coping Theories

Coping is characterized as a procedure of "continually changing subjective and behavioral endeavors to manage particular outer and/or inward requests that are assessed as exhausting or surpassing the resources of the individual. There are two types of adapting: Problem-focused coping utilized when we feel we have control over the circumstance, subsequently can manage the cause of the issue. There are four stages to deal with this anxiety: 1.Define the issue, 2. Produce elective arrangements, 3. Learn new aptitudes to managing stressors, 4. Reappraise and find new benchmarks of conduct. Emotion-focused coping utilized when an individual feels as though they can't deal with the root cause of the issue. It includes picking up methodologies for managing anxiety. 1. Maintaining a strategic distance from (I am not going to school), 2. Removing (yourself from the anxiety, 'it doesn't make a difference'), 3. Acknowledgment (I fizzled that exam, yet I have 4 different subjects), 4. Looking for Medical Support, 5. Using liquor.

Objectives

1) To determine a relationship between childhood maltreatment and PTSD symptomatology.
2) To examine the relationship between coping strategies and maltreatment factors.
3) To investigate differences in childhood maltreatment, PTSD symptomatology and coping on the bases of demographic variables.

Hypothesis

1) There would be significant relationship among childhood maltreatment and PTSD symptoms and coping.
2) There would be significant differences in childhood maltreatment, PTSD symptoms and coping on the basis of demographic variables.

Method

Sample

The sample comprised of 150 maltreated women between the ages 18 to 65 was selected through purposive sampling from shelter homes and old age homes of Lahore, Sahiwal, and Pakpttan.

Table 1

Demographic aspects of Total Sample (N=150)

Variables	*Frequency*	*Percentage*
Age		
18 – 29	61	40.7
30 – 41	49	32.7
42 - 53	27	18.0
54 - 65	13	8.7
Marital Status		
Single	24	16.0
Married	67	44.7
Divorced	32	21.3
Widowed	27	18.0
Residence		
Homeless	112	74.7
Home	38	25.3
Qualification		
Illiterate	39	26.0
Primary	33	22.0
Middle	10	6.7
F.A	17	11.3
Graduation	21	14.0
Master	04	2.7
Job Status		
Unemployed	109	72.7
Employed	41	27.3
Area		
Rural	76	50.7
Urban	74	49.3

Instruments

Childhood Trauma Questionnaire – Short Form (CTQ) by Bernstein & Fink, (1995). The CTQ was chosen to measure the construct of childhood maltreatment, the independent variable of this study. It is based on 28 items, self-report measure of the childhood maltreatment, using 5-point Likert scale 1 (never true) to 5 (very often true). Five dependent factors of childhood maltreated women sexual abuse, physical abuse, emotional abuse; physical neglect and emotional neglect were assessed by summing each subset.

Davidson Trauma Scale (DTS) by Davidson, (2003). The scale DTS used as dependent variable is a 17-item self-report measure that assesses both severity and frequency PTSD symptomatology experienced over the course of the previous week using five point-Likert scale. By summing both severity and frequency subscale showed the criterion B, C, D scoring. Items 1-4 and 17 relate to criterion B (intrusive re-experiencing), item 5-11 related to criterion C (avoidance and numbness) and item 12-16 related to criterion D (hyper-arousal) of Post-Traumatic Stress Disorder.

Brief Cope Scale (B-Cope) by Carver,(1997) used as dependent variable it is self-reported inventory consisted on 28 items that contain 14 separate scales and statements are rated on 4 point Likert rating scales from 0 as "I haven't been doing this all" to "I have been doing this a lot." Scoring of three coping types includes problem-focused coping, emotion-focusing coping, and dysfunctional coping were obtained by summing for the items in each subscale, with higher scores indicating greater use of that type of coping

Procedure

The data were collected from shelter homes and old age homes. The demographic variable sheet was used to collect the bio data from each respondent. Respondents fill the Childhood trauma questionnaire, Brief cope scale, and Davidson trauma scale. Respondents were informed about confidentiality issue. All these measures were examined by using Statistical Package for Social Sciences (SPSS, version 20.0).

Results

The present study was conducted to investigate the relationship among childhood maltreatment and post-traumatic stress disorder symptomatology and coping in abused women. The data comprised of 150 maltreated women of sheltered homes and old age homes examined and analyzed the in the light of the goals of the study.

Descriptive statistics was applied to depict scales averages and standard deviation and alpha reliability coefficients. Pearson correlation coefficient was applied to investigate the relationship among the variables. Then t-test and one-way analysis of variance was performed to measure variance in Childhood Trauma Questionnaire, Davidson Trauma Scale and Brief Cope in relation to the demographic variables such as age, qualification, marital status and cities.

Table 2

Pearson correlation of Childhood Maltreatment and PTSD Symptomatology.

Scales	P.Abuse	E.Abuse	S.Abuse	P.neglect	E.neglect	Criterion.B	Criterion.C	Criterion.D
P.Abuse	1	.230**	.073	.243**	-.081	.066	.145	.046
E.Abuse		1	-.090	.458**	-.085	-.004	.128	.117
S.Abuse			1	-.004	.178*	.085	.109	-.077
P.neglect				1	-.077	.133	.160	.181*
E.neglect					1	.091	.110	-.045
Criterion.B						1	.440**	.283**
Criterion.C							1	.128
Criterion.D								1

Note:P.neglect means physical neglect and criterion D shows hyper-arousal symptoms.

Table 2 showed a correlation between maltreatment and PTSD symptomatology. In this table, results illustrate a correlation between physical neglect and criterion. D r =.18* that shows the PTSD symptoms of hyper-arousal.

Table 3

Pearson correlation of maltreatment and coping strategies

Scales	P.F.Coping	E.F.Coping	D.Coping	P.Abuse	E.Abuse	S.Abuse	P.neglect	E.neglect
P.F.Coping	1	.120	.019	.177*	.100	.085	.220**	.189*
E.F.Coping		1	.027	.016	.091	.043	.034	.065
D.Coping			1	-.054	-.301**	.118	-.022	.093
P.Abuse				1	.230**	.073	.243**	-.081
E.Abuse					1	-.090	.458**	-.085
S.Abuse						1	-.004	.178*
P.neglect							1	-.077
E.neglect								.349 1

Table 3 shows a correlation between maltreatment and coping strategies. This table shows relationship of Problem-Focused Coping (P. F) with physical abuse (P. abuse) r = .177*, also correlated with Emotional neglect .189*. Problem-focusing coping with Physical neglect (P. N) r = .22** that showed a strongly positive correlation. Denial coping showed strongly negative correlation with Emotional Abuse -.301**.

Table 4

One Way ANOVA variance test of maltreatment, PTSD symptoms and coping strategies on the basis of Marital Status.

Scales of variance	source	SS	Df	MS	F	P
P.F.Coping	Between Groups	4.678	3	1.559	2.588	.055
	Within Groups	87.962	146	.602		
	Total	92.640	149			
E.F.Coping	Between Groups	2.497	3	.832	1.033	.380
	Within Groups	117.643	146	.806		
	Total	120.140	149			
D.Coping	Between Groups	2.269	3	.756	.585	.626
	Within Groups	188.804	146	1.293		
	Total	191.073	149			
P.Abuse	Between Groups	3.579	3	1.193	.658	.579
	Within Groups	264.714	146	1.813		
	Total	268.293	149			
E.Abuse	Between Groups	5.510	3	1.837	.861	.463
	Within Groups	311.323	146	2.132		
	Total	316.833	149			
S.Abuse	Between Groups	6.779	3	2.260	1.333	.266
	Within Groups	247.494	146	1.695		
	Total	254.273	149			
P.neglect	Between Groups	.775	3	.258	.194	.901
	Within Groups	194.698	146	1.334		
	Total	195.473	149			
E.neglect	Between Groups	16.793	3	5.598	3.756	.012

	Within Groups	217.581	146	1.490		
	Total	234.373	149			
Criterion.B	Between Groups	.333	3	.111	.153	.928
	Within Groups	106.360	146	.728		
	Total	106.693	149			
Criterion.C	Between Groups	.119	3	.040	.089	.966
	Within Groups	65.381	146	.448		
	Total	65.500	149			
Criterion.D	Between Groups	.097	3	.032	.035	.991
	Within Groups	136.976	146	.938		
	Total	137.073	149			

Table 4 One-way ANOVA was administered to observe differences of maltreatment, PTSD Symptoms and coping strategies on the bases of marital Status. There was a significant difference only in Emotional neglect scores on for the four marital status groups $F(3,146) = 3.75$, (.012), $p < .05$.
In statistical significance, the real difference in mean score was little but its show somehow differences in means and Sd. The impact size was found by using eta squared that was .07.post- hoc examination using the Tukey HSD test that illustrate the mean scores for Group1(m = 62.95, Sd = 1.30) was not same as Group 4 (m = 61.85, Sd .76) Group 2 and 3 did not vary fundamentally from either group 1or 4.

Table 5

One Way ANOVA variance test of maltreatment, PTSD symptoms and coping strategies on the basis of education.

Scales	*Source of Variance*	*SS*	*Df*	*MS*	*F*	*P*
P.F.Coping	Between Groups	1.798	6	.300	.472	.829
	Within Groups	90.842	143	.635		
	Total	92.640	149			
E.F.Coping	Between Groups	1.950	6	.325	.393	.882
	Within Groups	118.190	143	.827		
	Total	120.140	149			
D.Coping	Between Groups	9.050	6	1.508	1.185	.318
	Within Groups	182.023	143	1.273		
	Total	191.073	149			
P.Abuse	Between Groups	26.028	6	4.338	2.561	.022
	Within Groups	242.265	143	1.694		
	Total	268.293	149			
E.Abuse	Between Groups	31.854	6	5.309	2.664	.018
	Within Groups	284.979	143	1.993		
	Total	316.833	149			
S.Abuse	Between Groups	19.321	6	3.220	1.960	.075
	Within Groups	234.952	143	1.643		
	Total	254.273	149			
P.neglect	Between Groups	27.185	6	4.531	3.850	.001
	Within Groups	168.288	143	1.177		
	Total	195.473	149			
E.neglect	Between Groups	16.266	6	2.711	1.777	.108
	Within Groups	218.108	143	1.525		
	Total	234.373	149			
Criterion.B	Between Groups	2.076	6	.346	.473	.828
	Within Groups	104.618	143	.732		
	Total	106.693	149			
Criterion.C	Between Groups	5.137	6	.856	2.028	.066
	Within Groups	60.363	143	.422		
	Total	65.500	149			
Criterion.D	Between Groups	6.349	6	1.058	1.158	.332
	Within Groups	130.724	143	.914		
	Total	137.073	149			

Table 5 One way ANOVA was administered to examine difference of maltreatment, PTSD Symptoms and coping on the bases of Education. There was significant differences were found in, Emotional

abuse F (6,143) = 2.66, (.018), P < .05, Physical neglect F (6,143) = 3.85 (.001) P < .05 and criterion C F (6,143) = 2.02 (.066) p < .05 scores on for the 7 groups of education.

In statistical significance, real difference in mean scores was found. The impact size was found by using eta squared that was 0.10. post hoe using the Tukey HSD test that illustrate the mean scores for Group 1 illiterate (m = 83.12, Sd.1.50) was not same and showed difference with Group 5 F.A (m = 81.88, Sd1.11) on the bases of Emotional Abuse while Group1 illiterate (m = 31.43, Sd.96) showed difference with Group 4 metric (m = 30.57, Sd 1.17), Group 6 graduation (m = 30.42, Sd 1.12) and Group 7 master (m = 29.50, Sd.57) , group 2, group3, group5 were not vary either group1,4,6 and group 7.

Table 6

One Way ANOVA variance test of maltreatment, PTSD symptoms and coping strategies on the basis of Cities

Scales	Source of variance	SS	Df	MS	F	P
P.F.Coping	Between Groups	2.430	2	1.215	1.980	.142
	Within Groups	90.210	147	.614		
	Total	92.640	149			
E.F.Coping	Between Groups	1.605	2	.802	.995	.372
	Within Groups	118.535	147	.806		
	Total	120.140	149			
D.Coping	Between Groups	3.833	2	1.916	1.504	.226
	Within Groups	187.241	147	1.274		
	Total	191.073	149			
P.Abuse	Between Groups	39.023	2	19.512	12.510	.000
	Within Groups	229.270	147	1.560		
	Total	268.293	149			
E.Abuse	Between Groups	27.798	2	13.899	7.069	.001
	Within Groups	289.035	147	1.966		
	Total	316.833	149			
S.Abuse	Between Groups	12.236	2	6.118	3.716	.027
	Within Groups	242.037	147	1.647		
	Total	254.273	149			
P.neglect	Between Groups	25.159	2	12.579	10.857	.000
	Within Groups	170.314	147	1.159		
	Total	195.473	149			
E.neglect	Between Groups	2.468	2	1.234	.782	.459
	Within Groups	231.905	147	1.578		
	Total	234.373	149			
Criterion. B	Between Groups	.969	2	.484	.674	.511
	Within Groups	105.724	147	.719		

	Total	106.693	149			
Criterion. C	Between Groups	1.812	2	.906	2.091	.127
	Within Groups	63.688	147	.433		
	Total	65.500	149			
Criterion. D	Between Groups	1.659	2	.830	.901	.409
	Within Groups	135.414	147	.921		
	Total	137.073	149			

In this table, One Way ANOVA was administered to examine the difference between maltreatment, PTSD symptoms and coping strategies on the bases of cities. By statistical way mean scores were different, F (2,147) = 12.57, (.000) p < .05, the impact size was 0.1, Group 3 Pakpattan (m = 61.72, Sd 1.06) altogether different with group 1 Sahiwal (m = 60.73, Sd 1.32 and group 2 Lahore (m = 60.50, Sd 1.30) in maltreatment factors of Physical abuse.

The mean scores were different F (2,147) = 7.069, (.001) p < .05, impact size was .08, group 3 Pakpattan (m = 61.72, Sd 1.35) was different with group 1 and group 2 in Emotional Abuse.

The mean scores were different F (2,147) = 3.71, (.027) p < .05, impact size was .04, group 1 (m = 91.90, Sd 1.35) showed significant difference with group 3 (m = 92.67, Sd 1.09) in maltreatment factor of sexual abuse.

The mean scores were different F (2,147) = 10.85, (.000) p <.05, impact size was 0.1, group 3 (m = 31.47, Sd.98) was different from group 1 and group 3 while group 1 and 3 not vary each other.

Table 7

Levene's Independent sample t-test of maltreatment, PTSD symptomatology and coping strategies on the basis of Job Status.

Maltreated women (n=150)								
Variable	Unemployed		Employed		t	p	95%CI	Cohen's d
	M	SD	M	SD				
P.neglecte	31.03	1.03	30.34	1.27	3.121	.003	[-.79,17]	0.59

Note: P. neglect=Physical neglect

Table 6 Leven's independent sample t-test was administered to examine differences of maltreatment factors, PTSD symptoms and coping on the bases of Job Status. The physical neglect factor shows significant value .006, select second line of table, t = 3.121, df 60.86, 2 tailed significant value was .003, unemployed with mean score (m = 31.03, Sd 1.03) and employed mean score (m = 30.34, Sd 1.27) with moderated effect size of physical neglect on job status.

Table 8

Leven's Independent Sample t test of scales on the basis of Area

Maltreated women (n=150)								
Variable	Rural		Urban		t	p	95%CI	Cohen's d
	M	SD	M	SD				
P.neglect	31.65	1.05	30.63	1.20	2.26	0.25	[.05,.78]	0.90

Note: P.neglect=Physical neglect

In table 7 Leven's independent sample t test was administered to examine the differences in scales on the bases of Area. The physical neglect factor of maltreatment shows significant value .01, after selecting the second line of table, t = 2.263, df 148, 2 tailed significant value 0.25, that showed Rural with mean score (m = 31.05, Sd 1.05) and Urban mean score (m = 30.63, Sd 1.20) with moderating effect size of physical neglect on the bases of area.

Discussion

Maltreatment continuously increased during the last decades in Pakistan, maltreated women also suffered from PTSD symptomatology after the intense abusive behavior. They may adopt PTSD symptoms after maltreatment in childhood which became long-lasting years by years.

Previous researches also showed the significant relation between maltreatment and PTSD symptoms, childhood history of physical-emotional abuse or sexual-emotional abuse was initiated to be significantly related to current PTSD symptomatology. Statistically significant positive correlations existed between the physical- emotional abuse childhood maltreatment component and current PTSD symptomatology, as well as between the sexual-emotional abuse childhood maltreatment component and current PTSD symptomatology. The positive correlation between the neglect childhood maltreatment component and current PTSD symptomatology was not statistically significant.

The present study results illustrated a significant relationship between five factors of maltreatment and PTSD symptomatology in maltreated women of shelter homes and old age home. The results of this study showed significant correlation between the physical neglect factors of maltreatment with criterion D that shows the PTSD symptomatology of hyperarousal. In this study results showed that through physical neglect the symptoms of hyperarousal have more chance to occur.

Some previous researches showed the relationship of some factors of maltreatment with current PTSD symptomatology, one of previous research illustrate link between both physical-sexual abuse and current PTSD symptomatology and sexual-emotional abuse and PTSD symptomatology are consistent with evidence from a number of studies that have found that physically and sexually abused children may be at increased risk for developing PTSD in adulthood (Schaaf & McCanne, 1998; Widom, 1999).

Results showed that women faced physical abuse and emotional neglect in childhood adopt the problem-focused coping strategy and women with physical neglect adopt in more amount of this coping strategy. Denial coping strategy used those who faced emotional abuse in childhood.

Coping relationship with factors of maltreatment also examined in this research that showed which maltreatment factors correlate with coping strategies. A history of child maltreatment was associated with increased emotion-focused coping and physical abuse and sexual abuse defined link with problem focused coping and also with dysfunctional coping (Gall, 2006; Runtz & Schallow, 1997).

In another study coping strategies were also showed positive relationship between child maltreatment and physical health status (Hgerr, McGill University, 2006) which investigated the mediating influence of problem-focused coping. This study showed results that there is a correlation between coping strategies and five factors of maltreatment. Strong correlations were found between several variables of Problem-solving coping positively correlated with both physical abuse and sexual abuse, (Stephen & Long, 1999).

Demographic variables of age, marital status, residence, education, job status, area, organization were used in this study in order to determine differences with maltreatment, PTSD symptomatology, and coping strategies. However, difference did not show with age variable while marital status showed significant differences with study variables.

The results showed differences in maltreatment factors and PTSD symptoms on the basis of qualification. According to Maria (1990) finding, showed differences in the groups of qualification illiterate and graduation on the basis of physical abuse. According to these findings the women who faced a great deal of emotional abuse as a child were illiterate or less educated while women who did graduation and master had less physical neglect. Physical neglect was found greater in illiterate women as compared to educated females, which shows as the maltreatment increases educational achievement decreases.

Exposure to one or more types of maltreatment may result in an array of negative outcomes, including lower academic achievement. Children exposed to maltreatment are at increased risk of educational underachievement, including lower verbal and math scores (National Children Advocacy Center, 2013).

The analysis showed significant differences on the basis of marital status in four groups. According to this study results, single women had a history of emotional neglection as compared to widow women while married and divorced women had the same amount of emotional neglection with widow one.

In these finding results about cities showed that women of Pakpattan city faced higher amount of physical abuse, emotional abuse and physical neglect as compared to Sahiwal and Lahore while the amount of Sexual abuse found in less amount in sahiwal's women as compared to other cities. The second hypothesis was there would be significant differences between maltreatment, PTSD symptoms and coping strategies which accepted after analysis. In another finding maltreated women showed a difference on the basis of cities, the amount of abusive behavior and coping strategies were different as their cities were changed (Hobfoll, 1989).

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