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OBJECTIVES

The main objectives of the Journal are:

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-To assemble all who are interested in these fields for an exchange of ideas and experiences;

-To disseminate research findings;

-To provide a database for members and researchers.

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Effectiveness of a Phonological Awareness Training Intervention on Word recognition ability of Children with Autism Spectrum Disorder

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Abstract

This study describes an action research project designed to improve word recognition ability of children with Autism Spectrum Disorder . Method. A total of 47 children diagnosed as having Autism Spectrum Disorder using Autism Spectrum Disorder Evaluation Inventory (Mohammed, 2006), participated in this study . The sample was randomly divided into two groups; experimental (n= 24; 16 M ,8 F) and control (n= 23; 18 M, 5 F). ANCOVA and Repeated Measures Analyses were employed for data analysis. Results. Findings from this study indicated the effectiveness of the program employed in word recognition ability in the target children . Discussion. The study supports the idea of PA as a powerful intervention for children Autism Spectrum Disorder.

Keywords. Phonological awareness, word recognition ability, children with autism spectrum disorder.

Introduction

Phonological processing is concerned with different operations in language that use information about the sound (i.e. phonological) structure of language. It can be regarded as a set of mental activities or skills that are prequisites in reading or learning to read. It involves accessing, storing ,or manipulating phonological information(Eissa, 2007) . It also involves a certain type of knowing about words- that they are made up of individual speech elements, which can be divided into segments of sounds smaller than a syllable. It is one aspect of the spoken language system which is important to early reading . Phonological processing is an insight about oral language, in terms of understanding that words are composed of sequences of small sounds called phonemes. In other words, phonological processing is a linguistic awareness that enables the individual to make use of information about speech and sound structure of the language (Eissa, 2007) .

Although Some studies have measured the remediation of phonological awareness skills in children with reading disabilities (Eissa, 2007), children with intellectual disability (Tofaha & Eissa, 2011), no studies have focused specifically on the effect of phonological awareness training on children with Autism Spectrum Disorder. So, the present study seeks to explore the effectiveness of a phonological awareness – based program in word recognition in children with Autism Spectrum Disorder. It addresses the following questions :

1-Is there a significant difference between the posttest word recognition scores of the children in the experiment group and those in the experiment group ?

2-In case of the program effectiveness, is this effect still evident a period after the intervention?

Autism Spectrum Disorder

Leo Kanner , in 1943 , introduced the label early infantile autism. About the same time , Hans Asperger, described a milder form of autism that became known as Asperger syndrome (Bernad-Ripoll, 2007; Ledford & Gast, 2006). Despite the efforts of numerous researchers autism remains a unique and perplexing disability. Autism Disorder ,in the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (Text Review) (DSM-IV TR) (APA 2000), is defined as a pervasive developmental disorder marked by social and communication impairments along with a restricted repertoire of activities and interests.

Phonological Awareness

Definition of Phonological Awareness

Layton and Deeny(2002) define phonological awareness as children's ability to define and manipulate the sound structure of oral language. In order to acquire phonological awareness children have to learn two things. First, words can be divided into segments of sound smaller than a syllable. Second, they should learn about individual phonemes themselves (Torgesen, 2000). Children's awareness of phonological structure of a word helps them to connect between the spoken form of a word and its written representation (Gillon, 2004).

Levels of Phonological Awareness. It can be confirmed that phonological awareness is a general ability that has multiple dimensions all of which vary in difficulty (Smith, Simmons, & Kameenui, 1998). It can be described in terms of three different levels which are onset-rime awareness, syllable awareness and phoneme awareness (Gillon ,2004).

Onset-rime Awareness. The rime , according to Adams (1990) is the obligatory part of the syllable consisting of its vowel and any consonant sounds that come after it, whereas onset consists of any consonant sounds that precede the vowel. It can be said that children are considered to have awareness of onset-rime in case of they are able to analyze syllables into onset and rime units in an oddity tasks (Treiman, 1992).

Syllable Awareness. Syllable awareness , according to Adams (1990) is children's ability to detect the smallest unit of speech that can be produced in isolation. It is suggested by some linguistics awareness (e.g. Adam, 1990; Tingley, Dore, Parsons, Campbell,& Bird 2004; Treiman,1992) that children develop syllable awareness before the development of other phonological skills such as on-set rime and phonemic.

Phonemic Awareness. Phoneme ,according to Gillon (2004) is the smallest unit of sound that influences the meaning of a word. As it is stated by Adams (1990), the awareness of phonemes includes the abilities to segment, rearrange, and substitute them one for the other. Some pioneers in the field (e.g.Sawyer & Fox 1991; Treiman, 1992; Adams, 1990; Cook & Bassetti 2005) claim that awareness of phonemes is critical for learning an alphabetic writing system .Moreover, Torgesen (2000) suggests that although phonemic decoding skills should never be considered the end goal of reading, research now shows that, for most children, these skills are a critical step along the way toward effective reading skills. It was pointed out by Share and Stanovich (1995) that phoneme awareness performance is a strong predictor of long-term reading and spelling success and can predict literacy performance more accurately than variables such as intelligence, vocabulary knowledge, and socioeconomic status.

Phonological Awareness Training

phonological ability is something that has an innate ability, which allows children to manipulate phonological elements intentionally (Oktay and Aktan ,2002).Additionally, it was suggested by Cassady and Smith (2004) that children should be trained to blend body-codas first, then to progress to more phonologically difficult blending tasks such as onset-rimes and phonemes. Reading can be acquired , as claimed by some authors (Cheung et al. ,2001) by children getting phonological training. Those authors claim that bilingual children develop phonological awareness earlier, but in the end, monolingual children reach the same level once they receive phonological skill training in reading development. Nevertheless, children can gain phonological skills if they have had exposure in their mother tongue language (Durguno lu ,2002) .

Assessment of Phonological Awareness. Some Phonological tasks are easy to be acquired than others. For example onset/rime tasks are easier than other phonological awareness tasks (Treiman ,1992). On the other hand, onset clusters can be very difficult in the task of phoneme deletion. Additionally, the analysis of syllables into phonemes is also difficult. Some researchers (Daly et al. ,2005) sought to arrange phonological awareness skills in the light of their difficulty level . Those authors found that children's skill to rhyme or identify words that are similar in beginnings or endings are much easier than their skill in requiring greater, or more explicit, manipulation of sounds such as segmenting, blending and deleting sounds. Another author(Torgesen,2000) proposed other three tasks for assessing phonological awareness. They are sound comparison tasks, phoneme segmentation tasks and phoneme blending tasks. He regarded sound comparison measures to be easier and are sensitive to phonological awareness emergence, whereas segmentation and blending measures are sensitive to differences among children during later stages of development involving refinements in explicit levels of awareness. He also confirmed that measures of sensitivity to rhyme are less predictive of reading disabilities than those measures that ask children to attend to individual phonemes.

Phonological Awareness in children with Autism Spectrum Disorder

Children with Autism Spectrum Disorder show delays in Phonological awareness. To date , however, no research, except for Heimann et al.'s study(1995) , has explored the effectiveness of Phonological Awareness intervention for children with Autism Spectrum Disorder. In Heimann et al.'s study(1995), 11 children with Autism Spectrum Disorder, 9 children with cognitive development , and 10 typically developing children showed an increase in vocabulary skills and word reading after participating in an interactive computer program aimed at teaching basic reading and writing vocabulary . Phonological awareness scores also improved , as measured by a Swedish standardized test that assesses phoneme segmentation , synthesis , and deletion .

Method

Participants

Children participants were diagnosed using Autism Spectrum Disorder Evaluation Inventory (Mohammed, 2006), were invited to participate. The sample was randomly divided into two groups; experimental (n= 24; 16 M, 8 F) and control (n= 23; 18 M, 5 F). The two groups were matched on age, IQ ,and word recognition ability . Table 1. shows means, standard deviations ,t- value , and significance level for experimental and control groups on age (by month) , IQ , and word recognition ability test scores (pre-test).

Table 1. *pre-test Means, standard deviations , t- value , and significance level for experimental and control groups on age (by month) , IQ, and word recognition ability test scores.*

Variable	Group	N	M	SD	T	Sig.
Age	Experimental	24	109.32	1.96	-.103	-
	Control	23	110.01	3.01		
IQ	Experimental	24	18.34	5.58	-.511	-
	Control	23	18.89	5.04		
word recognition ability	Experimental	24	6.36	2.03	-.321	-
	Control	23	6.82	2.71		

As indicated in Table 1. ,the two groups did not differ in age , IQ , and word recognition ability (pre-test) .

Measure

Word Recognition Ability Test . This test was specifically developed for this study. The test has three sub-tests ; namely recognizing word meaning test , where students are asked to match the word with its meaning(8 Items) , recognizing the opposite meaning test , where students are to match the word with its opposite(8 items) , and recognizing the correct word test , where students are asked to choose from a number of words in each row the correct word(8 items) .

Test reliability: Cronbach's alpha statistics was first employed . The result demonstrated the scale produced patterns of responses that were highly consistent, $\alpha = 0.87$.

Test validity: The scale was given to 10 professors of psychology to rate the items. Agreement proportions were ranging from 90% to 100% .

Test scoring: The score on each item ranging from 0 to 1 score , and the total score on the scale ranging from 0 to 24 scores .

Procedure

Children were selected, then pretest data were collected using the Word Recognition Ability Test. The classroom phonological awareness intervention was conducted with the experimental group for 5 weeks with 20 minute sessions conducted three times a week. The authors used a lot of phonological activities with experimental group , including phonological awareness skills (e.g. rhyming, sound/syllable matching, sound/syllable isolation, sound/syllable blending, sound/syllable addition or substitution, and sound/syllable segmentation).

The children were active participants as they sang , listened to, answered questions, and followed the author's directions. Phonological awareness activities included:

1. Sound Matching/Sound Identification

2. Rhyming Activities

3. Sound Addition or Substitution Activities

4. Sound/Syllable Blending Activities

5. Sound/Syllable Segmentation Activities.

The first author started with the earlier developing phonological awareness skills, such as matching and rhyming, and moved throughout the continuum of phonological awareness skills. These activities were rotated from easiest to hardest throughout the 5 week training period. At the end of the study, the posttest data were collected again using the same measure to determine the effectiveness of the phonological awareness intervention.

Experimental Design

An experimental Pretest-Posttest Control-Group design was used in this study. In this mixed design, two groups are formed by assigning half of the participants to the experimental group and half to the control group. Both groups were pretested and posttested in the same manner and at the same time in the study. The bivalent independent variable was the phonological awareness training and it assumed two values: presence versus absence of

phonological awareness training. The dependent variables were the gains in scores on Word Recognition Ability Test.

Results

Table 2. shows data on ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in Word Recognition Test scores. The table shows that the (F) value was (581.203) (**P < 0.01**).

Table 2. *ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in Word Recognition Ability Test scores*

Source	Type 111 sum of squares	df	Mean square	F	Sig.
Pre	.169	1	. 169		
Group	963.853	1	963.853	581.203	0.01
Error	72.969	44	1.685		
Total	1043.702	46			

Table 3. shows T. test results for the differences in post- test mean scores between experimental and control groups in Word Recognition Test scores . The table shows that (t) vale was (28.54). (**P < 0.01**) in the favor of experimental group.

Table 3. *T. test results for the differences in post- test mean scores between experimental and control groups in Word Recognition Ability Test scores.*

Group	N	Mean	Std. deviation	T	Sig.
Experimental	24	16.333	1.46	28.54	0.01
Control	23	6.831	1.65		

Table 4. shows data on repeated measures analysis for Word Recognition Ability test. The table shows that there are statistical differences between measures (pre- post- Follow – up) (**P < 0.01**).

Table 4. *Repeated measures analysis for Word Recognition Ability Test.*

Source	Type 111 sum of squares	df	Mean square	F	Sig.
Between groups	1326.521	1	1326.521	1.302	0.01
Error 1	45.846	45	1.019		
Between Measures	758.100	2	379.050	374.273	0.01
Measures x Groups	643.717	2	321.858	317.803	0.01
Error 2	91.149	90	45.000		

Table 5. shows data on Scheffe test for multi-comparisons in Word Recognition Ability test . The table shows that there are statistical differences between pre and post measures in favor

of post test, and between pre and follow –up measures in favor of follow – up testing, but no statistical differences between post and follow – up testing.

Table 5. *Scheffe test for multi-comparisons in Word Recognition Ability Test*

Measure	**Pre** **M= 6.82**	**Post** **M= 16.33**	**Follow up** **M= 15.70**
Pre	--	--	--
Post	9.75*	--	--
Sequential	9.12*	0.62	--

**. The mean difference is significant at the 0.05 level.*

Discussion

The present study aimed to find out if there was a significant difference between the posttest word recognition scores of the children in the experiment group and those in the experiment group . It also investigated If the program was effective, if this effect still evident a period after the intervention. Findings from this study showed that the phonological awareness activities were of great effect as they improved the Word Recognition Ability of children in treatment group,while it the mean score of the control group whose subjects did not receive such an intervention remained to great extent the same.

It can concluded from the findings of this study that phonological awareness is a powerful predictor of early reading achievement , so it goes in the same line with Yopp(1992)who indicated that phonological awareness is a prerequisite for learning to read ..

The effects of phonological awareness instruction have been addressed in previous research; however, this study contributed to the literature in several significant ways. First, it had implications that phonological awareness was teachable to younger children. Second, the results of this study indicated that children with autism Spectrum Disorder and had not received any formal reading instruction are capable of improving their Word Recognition Ability in preparation for their future reading. Finally, it is significant for educators to work to improve in Word Recognition Ability in children with autism Spectrum Disorder. This study demonstrated that phonological awareness skills can be effectively instructed to children with autism Spectrum Disorder better positioning them for reading success.

Children in the treatment group retained the learnt information for a long time even after the period of the intervention finished, and this indicates the training effect.

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The Effects of Advance Graphic Organizers Strategy Intervention on Academic Achievement, Self efficacy, and Motivation to Learn Social Studies in Learning Disabled Second Year Prep Students

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Abstract

This study investigated the effect of using advance graphic organizers on academic achievement, self efficacy ,and motivation to learn social studies in learning disabled second year prep students . A total of 60 students identified with LD were invited to participate. The sample was randomly divided into two groups; experimental (n= 30 , 23 boys ,7 girls)and control (n= 30 , 21 boys and 9 girls). ANCOVA and Repeated Measures Analyses were employed for data analysis. Findings from this study indicated the effectiveness of the program employed in improving academic achievement, self efficacy,and motivation to learn social studies in the target students. On the basis of the findings, the study advocated for the effectiveness of using advance graphic organizers on academic achievement, self efficacy, and motivation to learn social studies in learning disabled second year prep students

Key Words; *Advance graphic organizers, academic achievement, self efficacy , motivation, learning disabled.*

Introduction

Definition of Graphic Organizers and their Benefits

A graphic organizer can be defined as a visual and graphic display that depicts the relationships between facts, terms, and ideas within a learning task. Graphic organizers are also referred to as knowledge maps, concept maps, story maps, cognitive organizers, advance organizers, or concept diagrams (Strangman, Hall, & Meyer, 2003). Graphic organizers have multiple benefits. These benefits include helping learners grasp the material by assisting in seeing the relationships between ideas, concepts, or authors. Graphic organizers also assist in memory recall. Finally, graphic organizers encourage the use of developing higher-level thinking skills by assisting students to synthesize and integrate information, ideas, and concepts. Ellis and Howard (2007) stated that graphic organizers are effective across subject areas because they provide visual cues designed to assist students in their understanding of information by organizing information. According to Yin, Vanides, Ruiz-Primo Ayala, and Shavelson (2005), graphic organizers allow students a means of creating connections by visually showing relationships among concepts.

Social Studies and Graphic Organizers

Governale (1997) found that many students find social studies boring and wasting time. Carroll and Leander (2001) found that many students are frustrated, distracted, and bored because of the lack of learning strategies and with the meaningless reading assignments often associated with social studies. Student achievement in many subject areas is closely related to reading comprehension and vocabulary skills. This finding holds especially true for social studies; hence, much information is obtained through reading and comprehension. Brookbank et al. (1999) concluded that student underachievement can often be attributed to poor reading and comprehension skills.

Many students become disheartened and frustrated because they lack the ability to comprehend social studies reading material. The use of graphic organizers as a means of increasing student comprehension, aiding in recalling previously stored information from memory, and having an overall positive effect on students' attitudes toward social studies is supported in literature. With much of the present day instruction requiring students to have at least grade level reading skills, research has shown that graphic organizers facilitate readers

by enabling them in connecting main ideas and recalling important facts, thus improving reading and understanding.

Gallavan and Kotter (2007) have observed through their research, "Many teachers are concerned that social studies overwhelms their students; often, students view social studies as a complex and confusing subject unrelated to their contemporary world" (p. 117). Social studies students especially benefit from graphic organizers, according to Gallavan and Kotter, because "Graphic organizers or concept maps … help students sort, simplify, show relationships, make meaning, and manage data quickly and easily" (p. 117). Also, Gallavan and Kotter comment, "Graphic organizers can make learning social studies terminology, structures, and functions manageable and memorable" (p. 118).

Governale (1997) suggests that students will become more interested in social studies when graphic organizers are used before, during, and after the lesson. The organizer will allow the students to compare and contrast individuals, groups, and events. These comparisons will aid the children in making sense of the past and also help them in putting the pieces of the historical puzzle together (McCoy & Ketterlin-Geller, 2004). Carroll and Leander (2001) surmise that when students are able to comprehend and understand what they will be learning, their frustration levels will decrease and their motivation levels will increase.

DiCecco and Gleason (2002) examined the effect of graphic organizers on the learning of relational knowledge from social studies texts for 24 students with LD in middle school. Relational knowledge is the understanding of the relationships that link key concepts within a text (DiCecco & Gleason, 2002). The researchers used a pretest-posttest control group design for the study. Both the graphic organizer group and the control group received reading instruction as well as summary writing instruction over a one month (20 sessions) treatment period. The independent variable in the study was instruction on using graphic organizers. The findings of the study were a statistically significant advantage for the recall of relational knowledge statements in written essays by the graphic organizer intervention group in comparison to the control group after 20 sessions of instruction. An interesting finding was that on measures of factual content knowledge in multiple-choice tests and quizzes, there was no main effect for condition. This indicates that care must be taken in the assessment measures used to determine the effect of graphic organizers as their positive effects may not be visible in the recall of factual knowledge.

Ayres et al. (2005) piloted a study that implemented a one-group, nonrandomized, pre-posttest design. One group of students was observed to evaluate the effectiveness of technology-based instruction using a cognitive organizer designed using the Inspiration 8 (2008) software. A pretest/posttest treatment control group methodology was used to examine the impact of cognitive organizers, with the integration of technology (i.e., Inspiration 6 software) content-area learning in high school inclusive social studies classes. Twenty-nine, tenth-grade students in general education and 20 students with mild disabilities were randomly assigned to receive instruction using a graphic organizer generated by the Inspiration software.

The graphic organizer was printed out and handed to the students to use as a note-taking device during the lectures. Dependent measures included a 35-item, open-ended pre/posttest of declarative social studies knowledge to assess the effectiveness of the intervention. This resulted in a mean pretest score during the graphic organizer condition of 0.4 (SD = .9661, range 0-3); while the posttest score was 20.11 (SD = 5.46, range 11-28); and the delayed posttest score was 19.10 (SD = 6.60,range 12-30). These results indicated students who utilized a graphic organizer as the intervention significantly outperformed students as opposed to using traditional textbook instruction.

Another study that focused on social studies and graphic organizers was conducted by (Boon et al., 2007). This study used a pre-and post-group design with 10 participants all with a mild learning disability. This study was designed as an extension of the Ayres et al. (2005) and investigated the use of Inspiration (2008) and social studies lessons. In Ayres et al., a hard copy of the graphic organizer was printed from the software and the participants filled in the information with pencil during the teacher presented lesson. In Boon et al., however, the researchers had the participants fill out the Inspiration graphic organizer on a computer instead of on paper. The results of Boon et al. demonstrated an increase of the recall of content-area learning tasks for students with mild disabilities with the use of graphic organizers. Students who used the Inspiration software condition had a mean pretest of 11.60 [SD = 12.708), whereas the mean pretest score for the students in the control condition was 13.08 [SD = 9.604). However, after the introduction of the Inspiration software, the mean posttest score of students who used the software was 52.54 [SD = 13.305), the mean posttest score for students in the control condition was 26.84 [SD = 14.860). Data from an informal survey indicated that the participants were motivated in social studies class and liked to use the Inspiration 6 software to record, organize, edit, and summarize the most important information from the chapter.

Another study that focused on social studies and graphic organizers was conducted by (Adel Abdulla, 2010). This study aimed at improving social problem solving ability in primary five students with learning disabilities. Participants were (30) students with learning disabilities in Zagazig Educational Edara .The study used a remedial teaching program . Results showed the effectiveness of the program which was built on advance graphic organizers in improving social problem solving ability of the target students.

Further research is necessary to build on the vast amount of research into graphic organizers with learning disabled students. This will allow researchers to determine how graphic organizers can be best used as an intervention with learning disabled students as there is a dearth of research with this population. In order to address this issue with the lack of research on graphic organizers with learning disabled students. Thus the present study seeks to give answers to the following questions.

1- Are there differences in post-test scores mean between control and experimental groups on Academic Achievement test?
2- Are there differences in post-test scores mean between control and experimental groups on Self Efficacy test?
3- Are there differences in post-test scores mean between control and experimental groups on Academic Motivation test?
4- If the program is effective in academic achievement of experimental group, is this effect still evident a month later?
5- If the program is effective in self efficacy of experimental group, is this effect still evident a month later?
6- If the program is effective in academic motivation of experimental group, is this effect still evident a month later?

Methods

Participants

60 students participated in the present study. Each student participant met the following established criteria to be included in the study: (a) a diagnosis of LD by teacher's references, and learning disabilities screening test (Kamel,1990) (b) an IQ score on the Mental Abilities Test (Mosa, 1989) between 90 and 118 (c) absence of any other disabling condition.

The sample was randomly divided into two groups; experimental (n= 30 , 23 boys, 7 girls) and control (n= 30 , 21 boys and 9 girls)

The two groups were matched on age, IQ, academic achievement in social studies, self efficacy, and academic motivation. Table 1.shows means, standard deviations, t- value, and significance level for experimental and control groups on age (by month), IQ , academic achievement in social studies, self efficacy, and academic motivation (pre-test).

Table 1. *means, standard deviations, t- value , and significance level for experimental and control groups on age (by month),IQ, academic achievement in social studies, self efficacy, and academic motivation (pre-test).*

Variable	Group	N	M	SD	T	Sig.
Age	Experimental	30	169.24	1.96	-.121	Not Sig.
	Control	30	1168.41	2.01		
IQ	Experimental	30	111.34	4.45	-.221	Not Sig.
	Control	30	111.89	4.24		
Academic Achievement In Social Studies	Experimental	30	17.21	3.00	-.547	Not Sig.
	Control	30	17.67	3.52		
Self Efficacy	Experimental	30	24.80	2.65	-.539	Not Sig.
	Control	30	25.83	2.32		
Academic Motivation	Experimental	30	35.27	3.00	-.547	Not Sig.
	Control	30	35.85	3.52		

Table 1. shows that al t- values did not reach significance level . This indicated that the two groups did not differ in age (by month),IQ, academic achievement in social studies , self efficacy , and academic motivation (pre-test).

Instruments

1- *Academic Achievement Test*: The end-of- year examination results of the participants in social studies standardized and marked by the teachers , and provided the summative evaluation scores for the analysis. Hence, scores in the social studies served as the measures of students' achievement.

2- Me and Social Studies: Social Studies Self-Efficacy: Me and Social Studies was developed for two purposes: one, to provide an intermediate rather than specific measure of math self-efficacy, and two, to provide a scale which might profile students' strong or weak self-efficacious characteristics. Current math self-efficacy instruments tend to be specific in specific content and questions. Factor Analysis yielded three factors: Effort, ability , and resiliency .

In completing Me and Social Studies, students were instructed to respond by thinking how they felt about themselves with reference to math using a three point Likert scale (agree=3, Uncertain= 2 , and Disagree=1). Reliability coefficients were computed for the full scale (social studies self-efficacy) and subscales (ability, effort, resiliency). These results were -91 for Social Studies self efficacy, .93 for ability, -73 for effort, and -80 For resiliency.

3- *Intrinsic and Extrinsic Motivational Orientations Scale* : The Intrinsic and Extrinsic Motivational Orientations Scale consists of six subscales; three for Intrinsic Motivation (Challenge , Curiosity, Independent Mastery) , and three for Extrinsic Motivation (Easy Work, Pleasing Teacher , and Dependence on Teacher). a three point Likert scale (agree=3, Uncertain= 2 , and Disagree=1) was used . Reliability coefficients were computed for the full scale (Intrinsic and Extrinsic Motivational Orientations Scale) and subscales. These results were -91 for Intrinsic and Extrinsic Motivational Orientations Scale, .91 for

challenge , -73 for curiosity , and -80 For Independent Mastery, 0.82 for easy work , 0.76 for pleasing teacher, and 0.86 for dependence on teacher .

Procedures

Screening : Second year prep students who participated met the following established criteria to be included in the study: (a) a diagnosis of LD by teacher's references, and learning disabilities screening test (Kamel,1990) (b) an IQ score on the Mental Abilities Test (Mosa, 1989) between 90 and 118 (c) absence of any other disabling condition.

Pre-intervention testing : All the sixty students in grade two prep completed Me and Social Studies : Social Studies Self-Efficacy, which assesses students' self efficacy in social studies ; Intrinsic and Extrinsic Motivational Orientations Scale, which assesses students' intrinsic and extrinsic motivational orientations. Additionally , the end-of- year examination results of the participants in social studies standardized and marked by the teachers , and provided the summative evaluation scores for the analysis. Hence, scores in the social studies served as the measures of students' achievement. Thus data was reported for the students who completed the study.

General Instructional Procedures: Instruction was delivered to The second year social studies teacher [4]. Before the study started, instructors participated in 10 hours of training to learn how to implement the advance graphic organizers strategy . The teacher was provided with a notebook that contained detailed directions for implementing all activities and lessons. The teacher; Mrs Saada, received training and role-played implementing the strategy until she was able to do so to criterion. To help ensure complete implementation, she was provided with a checklist for each lesson. As she taught a lesson, each step was checked as it was completed.

The teacher, however, had the flexibility to respond to individual student needs, backing up and repeating a step, if necessary, or reordering steps. Students received 3 training sessions a week, lasting between 40 and 45 min. Instruction took place in the regular classroom in order to naturalize the situation.

Fidelity of Treatment Implementation: To ensure that strategy instruction was delivered as intended, the following four safeguards were implemented. One, the teacher received training to criterion in how to apply the instructional procedures. Two, teacher met with the author weekly and communicated daily with the author (as needed) to discuss any noteworthy occurrences that took place when implementing instructional procedures. Reported difficulties occurred rarely and usually involved the need to individualize further for a particular student to deal with a behavioral issue. Responses to issues such as these were discussed and implemented.

Three, the teacher had a checklist for each student that contained step-by step directions for each lesson. As the teacher completed a lesson step, she placed a check by it. For 42% of the sessions, the researcher also assessed treatment integrity by recording the presence or absence of each component. Session integrity was computed by dividing the number of lesson components taught by the total number of components and multiplying the quantity by 100. Average session integrity scores were computed for each participant.

[4] The researcher wishes to thank to Mrs. Saada Waheeb, the school social studies teacher, and a Doctorate Candidate , for her assistance .

Design and Analysis

The effects of implementing the advance graphic organizers strategy on students' academic achievement, self efficacy, and academic motivation were assessed using a repeated-measures design, pre- post- and follow-up testing.

Results

Table 2. shows data on ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in academic achievement . The table shows that the (F) value was (132.872) and it was significant value at the level (0.01).

Table 2. *ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in academic achievement*

Source	**Type 111 Sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Pre	907	1	907		
Group	2029,969	1	2029.969	132.872	0.01
Error	977.771	57	15.278		
Total	3013.194	59			

Table 3. shows T. test results for the differences in post- test mean scores between experimental and control groups in academic achievement . The table shows that (t) vale was (14.462). This value is significant at the level (0.01) in the favor of experimental group. The table also shows that there are differences in post- test mean scores between experimental and control groups in academic achievement in the favor of experimental group.

Table 3. *T. test results for the differences in post- test mean scores between experimental and control groups in academic achievement*

Group	**N**	**Mean**	**Std. deviation**	**T**	**Sig.**
Experimental	30	33.45	3.40	14.462	0.01
Control	30	17.63	2.94		

Table 4. shows data on ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in self efficacy . The table shows that the (F) value was (131.099) and it was significant value at the level (0.01).

Table 4. *ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in self efficacy*

Source	**Type 111 Sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Pre	17.004	1	17.004		
Group	30055.895	1	30055.895	131.099	0.01
Error	13067.862	57	229.261		
Total	43369.933	59			

Table 5. shows T. test results for the differences in post- test mean scores between experimental and control groups in self efficacy. The table shows that (t) vale was (11.568). This value is significant at the level (0.01) in the favor of experimental group. The table also shows that there are differences in post- test mean scores between experimental and control groups in self efficacy in the favor of experimental group.

Table 5. *T. test results for the differences in post- test mean scores between experimental and control groups in self efficacy*

Group	N	Mean	Std. deviation	T	Sig.
Experimental	30	83.83	1.64	11.568	0.01
Control	30	38.90	3.81		

Table 6. shows data on ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in academic motivation . The table shows that the (F) value was (521.447) and it was significant value at the level (0.01).

Table 6. *ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in academic motivation*

Source	Type 111 Sum of squares	df	Mean square	F	Sig.
Pre	229.992	1	229.992		
Group	24640.438	1	24640.438	521.447	0.01
Error	2693. 474	57	47.254		
Total	29974.733	59			

Table 7. shows T. test results for the differences in post- test mean scores between experimental and control groups in academic motivation. The table shows that (t) vale was (23.166). This value is significant at the level (0.01) in the favor of experimental group. The table also shows that there are differences in post- test mean scores between experimental and control groups in academic motivation in the favor of experimental group.

Table 7. *T. test results for the differences in post- test mean scores between experimental and control groups in academic motivation*

Group	N	Mean	Std. deviation	T	Sig.
Experimental	30	81.000	4.04	23.166	0.01
Control	30	38.533	5.22		

Table 8. shows data on repeated measures analysis for academic achievement. The table shows that there are statistical differences between measures (pre- post- follow up) at the level (0.01).

Table 8. *Repeated measures analysis for academic achievement*

Source	Type 111 sum of squares	df	Mean square	F	Sig.
Between groups	6323.974	1	6323.974	240. 362	0.01
Error 1	1710.165	58	26.310		
Between Measures	3743.818	2	1871.909	319.483	0.01
MeasuresxGroups	3827.121	2	1913.561	326.591	0.01
Error 2	761.695	116	5.859		

Table 9. shows data on Scheffe test for multi-comparisons in academic achievement test. The table shows that there are statistical differences between pre and post measures in favor of post test, and between pre and follow up measures in favor of follow up testing , but no statistical differences between post and follow up testing .

Table 9. *Scheffe test for multi-comparisons in academic achievement test*

Measure	**Pre** **M= 17.01**	**Post** **M= 33.45**	**Follow up** **M= 32.35**
Pre	--	--	--
Post	18.95*	--	--
Follow up	17.85*	1. 10	--

Table 10. shows data on repeated measures analysis for self efficacy. The table shows that there are statistical differences between measures (pre- post- follow up) at the level (0.01).

Table 10. *Repeated measures analysis for self efficacy*

Source	**Type 111 sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Between groups	50200.200	1	50200.200	590.551	0.01
Error 1	4930.333	58	85.006		
Between Measures	25297.033	2	12648.517	123.776	0.01
MeasuresxGroups	25515.700	2	12757.850	124.846	0.01
Error 2	11853.933	116	102.189		

Table11. shows data on Scheffe test for multi-comparisons in self efficacy test. The table shows that there are statistical differences between pre and post measures in favor of post test, and between pre and follow up measures in favor of follow up testing , but no statistical differences between post and follow up testing .

Table 11. *Scheffe test for multi-comparisons in self efficacy*

Measure	**Pre** **M= 39.20**	**Post** **M= 83.83**	**Follow up** **M= 85.13**
Pre	--	--	--
Post	44.633*	--	--
Follow up	45.933*	1. 300	--

Table 12. shows data on repeated measures analysis for academic motivation. The table shows that there are statistical differences between measures (pre- post- follow up) at the level (0.01).

Table 12. *Repeated measures analysis for academic motivation*

Source	**Type 111 sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Between groups	35224.022	1	5224.022	590.551	0.01
Error 1	2984.556	58	51.458		
Between Measures	23157.378	2	11578.689	497.742	0.01
MeasuresxGroups	19331.511	2	9665.756	415.509	0.01
Error 2	2698.444	116	23.262		

Table13. shows data on Scheffe test for multi-comparisons in academic motivation scale. The table shows that there are statistical differences between pre and post measures in favor of post test, and between pre and follow up measures in favor of follow up testing , but no statistical differences between post and follow up testing.

Table 13. *Scheffe test for multi-comparisons in academic motivation*

Measure	**Pre** **M= 35.73**	**Post** **M= 81.00**	**Follow up** **M= 82.50**
Pre	--	--	--
Post	45.26*	--	--
Follow up	46.76*	1. 500	--

Discussion

This study sought to determine the effects of the advance graphic organizers strategy in improving academic achievement, self efficacy and academic motivation of second year prep students with learning disabilities.

The results of this study showed that the advance graphic organizers strategy was effective in improving academic achievement, self efficacy and academic motivation of students in experimental group, compared to the control group whose individuals were left to be taught in a traditional way .

Participants of this study fall into the minimum IQ of 90, nevertheless, they have learning disability. Thus IQ score cannot account for learning disabilities.The results of the present study support that conclusion with evidence that students who participated in the study do not fall into the low IQ range,however they have learning disabilities.When designing a program based on advance graphic organizers strategy, they had statistical increase in academic achievement, self efficacy and academic motivation. This goes in line with what Mourad Ali et al (2006) notes that there is one problem " students who are identified as learning disabled often cover any special abilities and talents,so their weakness becomes the focus of their teachers and peers , ignoring their abilities. Mourad Ali (2007) , however , notes that " learning disabled , as well as gifted students can master the same contents and school subjects ", but they need to do that in a way that is different from that used in our schools .

Experimental group gained better scores in academic achievement, self efficacy and academic motivation tests than did control groups in post-tests though there were no statistical differences between the two groups in pre- test. This is due to the program which met the experimental group's needs and interests. On the contrary, the control group was left to be taught traditionally. This goes in line with our adopted perspective which indicates that traditional methods used in our schools do not direct students as individual toward tasks and materials, and do not challenge their abilities. This may lead students to hate all subjects and the school in general. On the contrary, when teachers adopt a technique that suits students interests and challenges their abilities with its various modalities, those students had a lot of gains.

Implications

The results of this study have several important implications. This study adds to the literature on the effectiveness of graphic organizers with learning disabled students. Results appear to indicate that graphic organizers are an effective instructional strategy for improving academic achievement, self efficacy and academic motivation test scores of students with learning disabilities. Graphic organizers provide students with a visual representation of the content in a text and this may facilitate the learning of content knowledge.

In addition, the findings of this study align with the findings of Adel Abdulla's study(2010) in which they proposed that graphic organizers are more effective when students are involved in the construction of the graphic organizer.

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Emotional Intelligence: Its Role in Managing Stress and Anxiety in Elementary School Teachers at Workplace

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Abstract

The study seeks to explain the role that emotional intelligence plays in managing stress and anxiety in elementary school teachers at their workplace .100 elementary school teachers from Saidy Salim Sector, Kafr EL Sheikh Governorate, Egypt were taken for the study. Emotional Intelligence Scale, Stress Inventory and General Anxiety test were used for the measurement of all the variables. Descriptive statistics, Correlation and Regression analysis were used for data Analysis. Results indicate that there was a significant relationship between Emotional Intelligence and the variables of Stress and Anxiety. Stress management component and anxiety component; emerge as statistically significant with respect to the relationship with Emotional Intelligence.

Keywords: Emotional Intelligence, stress, anxiety , elementary school teachers

Introduction

Over the last decade Emotional Intelligence (EI) has drawn significant interest from academics and HR practitioners throughout the world. The development of emotional intelligence skills is important because it is an area that is generally overlooked when skills development programs are designed. And yet research shows that emotions, properly managed, can drive trust, loyalty, and commitment. Many of the greatest productivity gains, innovations, and accomplishments of individuals, teams, and organisations have occurred within such a framework (Cooper, 1997).

Emotional intelligence is a social intelligence that enables people to recognise their own, and other peoples' emotions. Moreover, emotional intelligence enables people to differentiate those emotions, and to make appropriate choices for thinking and action (Cooper and Sawaf, 1997; Mayer and Salovey, 1993). It is an intelligence that may be learned, developed and improved (Perkins, 1994; Sternberg, 1996).

According to Salovey and Mayer (1990), emotional intelligence includes an "ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions". A related definition adds the "ability to adaptively recognize emotion, express emotion, regulate emotion and harness emotions" (Schutte et al., 1998). Personal or emotional intelligence has been found to vary by age or developmental level and gender (Gardner, 1999).

Emotional intelligence may be defined as the ability to use your awareness and sensitivity to discern the feelings underlying interpersonal communication, and to resist the temptation to respond impulsively and thoughtlessly, but instead to act from receptivity, authenticity and candour (Ryback, 1998). At its best, emotional intelligence is about influence without manipulation or abuse of authority. It is about perceiving, learning, relating, innovating, prioritising and acting in ways that take into account and legitimise emotions, rather than relying on logic or intellect or technical analysis alone (Ryback, 1998).

Emotional Intelligence is now being considered to be important in organisational factors such as: organisational change (Ferres & Connell, 2004; Singh, 2003); leadership (Ashkanasy, 2002; Dearborn, 2002; Gardner & Stough, 2002; Weymes, 2003); management performance (Slaski & Cartwright, 2002); perceiving occupational stress (Nicklaou & Tsaousis, 2002; Oginska-Bulik, 2005); and life satisfaction (Palmer, Donaldson & Stough, 2002). To meet organisational ends (Lord, Klimiski, & Kanfer 2002), it is not uncommon to use emotions and emotion related thoughts and behaviour as the ingredients in an institutionalised recipe of emotional culture.

Emotional intelligence has been found to impact on stress (Ciarrochi, Chan & Bajgar, 2001). Ciarrochi, Chan and Caput, (2000), for example, posit that emotional intelligence may protect people from stress and lead to better adaptation. They opine that an objective measure of emotion management skill is associated with a tendency to maintain an experimentally induced positive mood which has obvious implication for preventing stress. Bar-On (2003) found that there was a moderate yet significant relationship between emotional and social intelligence and psychological health. The aspects of emotional and social intelligent competencies that were found to impact on psychological health are: (a) the ability to manage emotion and cope with stress, (b) the drive to accomplish personal goals in order to actualize one's inner potential and lead a more meaningful life and (c) the ability to verify feelings and thinking.

*Basic Components Of Emotional Intelligence (Ei***)**

Thorndike (1920) conceptualized social intelligence as the ability to understand and manage men and women, boys and girls, to act wisely in human relations. Building on the work of Thorndike, Gardener (1983) developed the theory of multiple intelligences, wherein he classified intelligence into two namely categories: interpersonal and intrapersonal intelligences. He described interpersonal intelligence as the ability to understand other people, what motivates them, how they work, and how to work cooperatively with them. He identified teachers, politicians, salespersons, clinicians and religious leaders as individuals who are likely to have a high degree of interpersonal intelligence. Intrapersonal intelligence is a correlative ability turned inward. It is a capacity to form a veridical model of oneself and to be able to use that model to operate effectively in life. EI has basic components such as:

*Self-awareness***:** Self-awareness is the heart of emotional intelligence. It is the foundation on which most of the other elements of emotional intelligence are built, the necessary first step toward exploring and coming to understand yourself, and toward change. It is the ability to recognize and understand your moods, emotions, and drives as well as their impact on others. Emotional self-awareness is also about knowing what motivates you, what brings you fulfillment, and what lifts your heart and fills you with energy and aliveness.

*Self-regulation***:** Self-regulation or impulse control is-the ability to regulate your emotions and behavior so that you act appropriately in various situations. It involves resisting or delaying an impulse, drive, and temptation to act, responding versus reacting.

*Interpersonal skills***:** Interpersonal effectiveness involves being empathetic (i.e., being aware of, understanding, and appreciating the feelings of others); being a constructive, cooperative, and contributing member of your social group; and, establishing and maintaining mutually satisfying relationships.

*Adaptability***:** Adaptability is the capacity to cope with environmental demands by effectively and realistically sizing up and flexibly dealing with problematic situations. It is the ability to adjust your emotions, thoughts, and behavior to changing situations and conditions.

Stress Tolerance: Stress tolerance is the ability to withstand adverse events, stressful situations, and strong emotions without falling apart but by actively coping with stress.

*General Mood and Motivation***:** Two factors that facilitate emotionally intelligent behavior are optimism and happiness. Optimism is the ability to look at the brighter side of life and to maintain a positive attitude even in the face of adversity. Happiness is the ability to feel satisfied with one's life, to enjoy oneself and others, and to have fun and express a positive mood.

Stress Management and Emotional Intelligence

Stress is an unavoidable characteristic of life and work. It is a generalized non-specific response of the body to any demand made on it. Occupational stress describes physical, mental and emotional wear and tear brought about by incongruence between the requirement of the job and the capabilities, resources and needs of the employee to cope with job demands (Akinboye, Akinboye and Adeyemo, 2002). Occupational stress is pervasive and invasive. Stress in the workplace has assumed increased importance in recent times the world over. In 1992 the United Nations (Akinboye, et al,, 2002) describes "job stress" as the twentieth century disease. In the words of Akinboye et al, (2002) over 70% of employees world-wide describe their jobs as stressful with more than one in five reporting high levels of stress at work on a daily basis.

The relationship between EI and stress management, and the impact this relationship has on overall health and well-being has been a central theme in recent EI research (Salovey,et al., 2002; Graves, 2005; Slaski, 2003). Stress impacts individuals' perspectives at a variety of levels. Global events such as war, political strife, and terrorism have been shown to affect stress perceptions at a societal level. These large and overwhelming stresses are acutely felt by individual members within a society and can have a direct impact on the lives of individual citizens (Hartley, 2004).

Other studies have demonstrated the acute ability stress to negatively impact an individual's environment (Quebbeman, 2002). Whether taken from a macroenvironmental or micro-environmental perspective, EI researchers have attempted to discover relationships between a person's EI level and an ability to manage stress and stressful situations. There is a plethora of research describing the link between EI and stress management, as well as the affect such management might act as a predictor for an individual's overall psychological and physiological health and well-being. In an example of a study that examined the relationship between EI and its psychological impact, 158 college freshmen were assessed for both EI and stress (Gohm, et. al, 2005). It was determined that EI was useful for some members of the participant population in their ability to rationalize and reduce stress; but for others, EI was factored as non-important or unused. Other studies (Nikolaou, 2002; Quebbeman, 2002) determined much stronger relationships between an individual's EI level and reported stress levels.

Studies conducted by Montes-Berges et al., (2007) with nursing students have shown that emotional intelligence is a skill that minimizes the negative stress consequences. They examined the role of perceived emotional intelligence (PEI) measured by the Trait Meta-Mood Scale, in the use of stress-coping strategies, in the quantity and quality of social support and in the mental health of nursing students. The results indicated positive correlations between clarity and social support, social support and repair, and social support and mental health. Hierarchy regression analysis pointed out that clarity and emotional repair are predictors of social support, and emotional repair is the main predictor of mental health. These results show the importance of PEI in stress coping within the nursing framework.

Naidoo et al., (2008) has conducted a survey to gain some understanding of the explanatory factors for stress and an evaluation of the role that emotional intelligence (EI) plays in the experience of perceived stress (PS). It also aimed to compare EI and PS and explore the association between academic background, satisfaction with career choice and EI, and PS in first year dental students. The Survey was conducted on 43 male and 55 female students, Results of Correlation analysis between EI and PS indicated a statistically significant inverse relationship between EI and PS. Stepwise regression analysis identified significant predictors of PS as gender, previous higher education qualification, satisfaction

with decision to study dentistry and EI. The t statistic indicates that EI is relatively the most important predictor of PS. The finding revealed that low EI is associated the stress.

Accordingly, the strength of an organization can be greatly increased through the application of training programs which include EI skills. Research has determined that organizations which have implemented such programs have demonstrated increased trust and individual contribution (Jain, 2005; Jordan and Troth, 2004). A central theme threaded through a large majority of the literature on EI's effect on health and well-being is that higher levels of EI have most often correlated positively to good health and negatively to physically and psychologically destructive behaviors.

Anxiety and emotional intelligence

The basis for the proposed association between higher emotional intelligence and lower anxiety lies primarily on the hypnotized and identified relationships between emotional intelligence and better coping and the corresponding correlations between higher coping and lower anxiety. Such literature has suggested that individuals with higher emotional intelligence are better able to manage and cope with daily life hassles by being better able to regulate and manage their emotions. Better coping has further been related to lower anxiety.

Research on emotional intelligence and anxiety, reported that emotional intelligence was generally negatively correlated to anxiety . For example ,Head (20020 , and David (2002) (Both cited by Brackett and Salovey, 2004) have both reported low correlations between the MSCEIT (Total) and STAI (r= -.29 and r= -.31 , respectively) . In relation to self – report EI measures, Salovey et al. (2002) have found social anxiety (as assessed by the Social Anxiety subscale of the Self- Conscious Scale) to be low –to- moderately and negatively correlated with the Clarity (r=-.30) and repair (r= -.37) subscales of the TMMS , although the Attention subscale was low , but positively correlated (r= .11, N=108) . Additionally , Tsaousis and Nikolaou (2005) found scores on their Traits Emotional Intelligence Questionnaire to be low – to – moderately and negatively correlated with the anxiety subscale of the General Health Questionnaire (Perception :r=.20, Control : r= -,42, Utilisation : r= -.27, Understanding : r=-.17 ; N=365) . Furthermore, Furnham et al. (2003) have found highly anxious individuals to have the lowest scores on emotional intelligence in comparison to responsive or low anxiety individuals in a sample of 259 university students .

Aim of the research

The main purpose of this study was to examine the role of Emotional Intelligence in managing Stress and Anxiety in elementary school teachers.

Methods

Participants

One- hundred (26 females, and 74 males) elementary school teachers from Saidy Salim Sector, Kafr EL Sheikh Governorate, Egypt were taken for the study. The participants ranged from 25 to 43 years of age (M = 38.5).

Measures

Emotional Intelligence Scale: The Emotional Intelligence Scale was developed by Schutte et al. (1998). It is a 33-item scale with a five-point Likert-type scale. As suggested in Salovey and Mayer's theory of emotional intelligence (1990), the instrument has three categories: (a) the appraisal and expression of emotion assessed by 13 items; (b) the regulation of emotion assessed by 10 items; and (c) the utilisation of emotion assessed by 10

items. Participants read each statement and decide whether they 'strongly disagree', 'disagree', are 'undecided', 'agree', or 'strongly agree' with the statement.

Schutte et al. (1998) reported a Cronbach alpha (α) of 0.90 for the internal consistency for adults with mean age of 29.3 (S.D. = 10.2) and α = 0.78 for test-retest reliability after a two-week interval on the scale for a smaller group drawn from the sample. Schutte et al. (1998) reported predicted validity of r(63) = 0.32 for first year GPA of college students, for discriminant validity they reported r(41) = - 0.06 for the correlation between the scale and SAT scores, and r(22) = -0.28 to 0.54 for subscales of NEO Personality Inventory of scores of college students.

State-Trait Anxiety Inventory (STAI): The STAI is a 40-item self-report inventory that measures state and trait anxiety (Spielberger et al., 1970). Items assess how a participant general feels (trait) and her experience of anxiety at a particular moment (state). Test-retest reliability for the trait measure ranges from 0.73 to 0.86 for periods from 1 hour to 104 days in a group of college undergraduates (Spielberger et al., 1970). As expected, the test-retest reliability for the state measure is much lower, ranging from 0.16 to 0.54 (Spielberger et al., 1970). Internal consistency for both trait (STAI-T) and state (STAI-S) measures is good, ranging from 0.83 to 0.92 (Spielberger et al., 1970). The STAI also has good concurrent and construct validity (Spielberger et al., 1970).

Stress Perceived Scale (PSS; Cohen, Kamarak, & Mermelstein, 1983). There are three versions of the PSS: one with 4, one with 10, and one with 14 items. The version we used has 14 items and is rated on a 5-point Likert type scale, ranging from 0 (never) to 4 (very frequently). Scores of items 4, 5, 6, 7, 9, 10, and 13 are reversed. Higher scores correspond to higher perceived stress.

Results

Regression Analysis, Descriptive statistics and Pearson Correlation were also used. The results of various analyses have been presented in separate headings.

Descriptive Statistics

Table 1 presents the Mean and standard deviations of all the observed variables. Descriptive statistics was worked out to know the pattern of score distribution. A perusal of table 1 reveals that the mean score on Anxiety variable is 12.2 with the standard deviation of 3.7. The mean score on Stress is 25.3 with the SD of 2.9 and on Emotional Intelligence (EI) the mean score was 128.16 with the SD of 2.8. It shows that the scores on Anxiety variable ranged Average and Normal. Similarly on Stress and Emotional Intelligence variables the score ranges average and above average but normal.

Table 1 –*Mean and Std. Deviation*

Variables	**Mean**	**SD**
Anxiety	12.2	3.7
Stress	25.3	2.9
Emotional Intelligence	128.16	2.8

Correlations

Correlations among all the 3 variables were computed through Pearson's Product Movement method. It was aimed at examining the degree of association between the measures of Anxiety, Stress and Emotional Intelligence. A careful inspection of inter-

correlation matrix (Table - 2) reveals that all the variables correlate significantly with each other. The inter-correlation between Anxiety and stress is .710, which is significant at 0.001 probability level. It shows that the people who are having high stress are having more chances to develop anxiety. It can also be said that the stress can be the root cause of developing Anxiety in a person. The correlation between the measures of Anxiety and Emotional intelligence is also significant. The inter-correlation between the both is -.667, which is significant at .001probability level. Here the correlation between the both is negative but significant which shows that the people with low EQ (Emotional Intelligence) are having high anxiety, so it can be said that there is a negative association between the both. The correlation between stress and Emotional Intelligence (EQ) is negative but significant. The inter-correlation between the both is -.547 which is also significant at .001 probability level. It shows that people who are highly emotionally intelligent are having less probability to get stressed.

Table 2 – *Inter- Correlation Matrix*

Variables	**Anxiety**	**Stress**	**Emotional Intelligence**
Anxiety	1.00	.710**	-.667**
Stress	.710**	1.00	-.547**
Emotional Intelligence	-.667**	-.547**	1.00

*** Correlation is significant at the 0.01 level.*

Regression Analysis

Regression analysis was computed to assess the strength of relationship between dependent variable and a set of independent variables. Regression Analysis provides an opportunity with little ambiguity to assess the importance of each of the predictors to the overall relationship. The results of regression analysis for the dependent variable Emotional Intelligence (EI) are presented in table 3. It is clear from the results that the regression analysis accepted both (Anxiety and stress) the variables as a significant predictor of Emotional Intelligence. In Overall both the predictors contributed Multiple R of .675. The F ratio computed for the significance of multiple R is 48.98, which is significant at .001 probability level.

Table 3 *Final Summary of Regression Analysis Dependent Variable: Emotional intelligence*

Multiple R	**.675**		**Df**	**SS**	**MS**
R Square	.456	Regression	2	6468.17	3234.08
Adjusted R Square	.446	Residual	117	7724.75	66.02
Standard Error	8.125	F	48.98	P	<.001

Variables in the Equation

Variables	**B**	**SEB**	**Beta**	**P**	**t**
Anxiety	-3.34	.592	-.562	.001	-5.804
Stress	-9.28	.061	-.147	.131	-1.52

Conclusion

In summary, the findings from this study indicate that the low and high level of Emotional Intelligence establish relationship to some extent with stress and anxiety. Negative correlation of Emotional Intelligence with stress and Anxiety highlights that emotional intelligence will prove helpful tool in dealing with stress and anxiety.

The studies conducted by Oginska et al., (2005), Matthews et al., (2006), Montes-Berges et al., (2007), Naidoo et al., (2008) etc, also reveals similar results. So it can be said that 'emotional intelligence,' is the ability to restrain negative feelings such as anger, self-doubt, stress, anxiety and instead focus on positive ones such as confidence, empathy and congeniality. So one should emphasize on developing emotional intelligent to overcome stress and anxiety at workplace and to get success in life.

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The Effect of Social Stories intervention Technique on Self Management of Eating Behavior of a Child with Autism

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Abstract

This study explores whether or not Social Stories Intervention Strategy have positive effects on the eating behavior of a girl child with autism. Method. A girl child diagnosed as having autism disorder participated in the study. A pre- post- follow up design was used to examine the effectiveness of the social stories Intervention Strategy on the eating behavior of the target child. Results. Findings from this study indicated the effectiveness of the social stories intervention employed in teaching the target child self management of eating. Discussion. On the basis of the findings, the study advocated for the effectiveness of the social stories intervention employed in teaching the target child self management of eating.

***Keywords*:** Social stories, eating, Social Stories Intervention Strategy, autism

Introduction

A social story is an individualized short story that describes social relevant cues in any given situation. It breaks down a challenging social situation into understandable steps by omitting irrelevant information and by being highly descriptive to help an individual with ASD understand the entirety of a situation. It includes answers to questions such as who, what, when, where, and why in social situations through the use of visuals and written text (Scattone et al., 2002). A social story reveals accurate social information in a clear and reassuring manner that is easily understood by the individual with an ASD. The improved understanding of the events and expectations may lead to a change in behavior (Ali and Frederickson, 2006). Experience indicates social stories are often effective with mid to higher functioning students with ASD, and may be applicable to students with other learning impairments as well. They serve as visual supports that are reported to be useful in educational program for children with autism who have difficulty in processing and comprehending spoken language and social communications (Lal, 2010).

A growing body of literature has examined the effectiveness of social stories with individuals with autism. Existing literature showed that social stories were effective in decreasing aggressive behavior (Adams, Gouvousis, Van Lue, & Waldron, 2004; Gray & Garand, 1993; Romano, 2002; Rowe, 1999), increasing appropriate behaviors (Agosta, Graetz, Mastropieri, & Scruggs, 2004; Cullain, 2000; Graetz, 2003; Kuoch & Mirenda, 2003, Smith, 2001), increasing the use of appropriate social skills (Barry & Burley 2004; Hagiwara, 1998; Pettigrew, 1998), increasing greeting behavior and initiation of play activities (Feinberg, 2001), increasing on-task behavior (Brownell, 2002), increasing appropriate meal-eating behavior (Staley, 2001) and decreasing precursors of tantrum behaviors (Simpson & Myles, 2002).

Therefore the purpose of this study is to expand the scope of research on the use of a Social Story to teach self management of eating behavior of a child with autism. The present paper addresses the following question :

1. Does the use of the social stories intervention strategy have a positive effect on self management of eating behavior of the target child ?

Autism Spectrum Disorder

Autism Spectrum Disorder (ASD) represents a severe form of a pervasive developmental disorder which is characterized by impairments in social relationships and communication skills and which often is accompanied by the “presence of unusual activities and interests such as rituals, stereotypes, and poor play skills” (Batshaw, 1997, p. 425). ASD

is often referred to as a "spectrum disorder," which describes the variety of symptoms and severity that may be present within the individual (Tanguay, 2000). Neurologists, neuropsychologists, and other qualified professionals utilize the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) of the American Psychiatric Association to diagnose ASD. "The essential features necessary for the diagnosis of autistic disorder include 'the presence of markedly abnormal or impaired development in social interaction and communication and a markedly restricted repertoire of activity and interests'" (Scott, Clark & Brady, 2000, p.66).

By definition, symptoms of autism appear prior to age 3, however some children may not be diagnosed until they are school age (Batshaw, 1997). Autism is included as one of the educational categories that may qualify students, who present an educational need, for special education services under the federal IDEA law. "This definition, and every other definition of autism is a description of symptoms.

As such, autism is recognized as a syndrome, not a disease in the traditional sense of the word. Although autism is defined and assessed by observing behavioral characteristics, it is not considered a behavioral, an emotional, or a conduct disorder, or a mental illness" (Shriver, Allen & Mathews, 1999, p. 539).

Social Stories

The use of social stories is a method that is increasingly suggested for improving social skills of children with autism . The rationale of social stories is based on the growing body of empirical evidence which reveals these affected children's innate inability to "read" social cues and perspectives of others, and their difficulty in interpreting the meaning of an event as a whole from diverse pieces of information (Gray, 1998). As first described by Gray and Garand (1993), social stories are "short stories that describe social situations in terms of relevant social cues and often define appropriate responses" (p.1).

In other words, social stories are designed to provide children with autism with the information they are missing (Kuoch & Mirenda, 2003). The technique is used to assist these individuals in understanding and interpreting challenging or confusing social situations by providing them with important social cues and increasing their awareness and understanding of the who, what, when, where, and why of social situations (Sansosti, Powell-Smith, & Kincaid, 2004). Appropriate responses are expected to be formulated on their own after having an accurate understanding of situations.

Effectiveness of Social Stories

Social stories are basically applicable to any situations in school, home, and community settings (Gray & Garand, 1993). A number of clinical case studies and scientific research have been carried out in these environments to examine the efficacy of the technique on children with autism or other subcategories under the umbrella of Pervasive Developmental Disorders who have a variety of social and behavioral needs.

Research on Social Stories

In a study conducted by Scattone, Wilczynski, Edwards, and Rabian (2002), three students of varying ages participated. All were capable of communication using speech and all were in self-contained classrooms. The authors utilized a multiple baseline across subjects design to evaluate the impact of the social stories on the percentage of intervals in which staring, shouting, and chair tipping were observed by the experimenters.

Two subjects read the story aloud to an adult and one subject had the story read to him each day by an adult in the classroom. In addition, the stories were available for the students

to look at or re-read throughout the day. A visual examination of the results showed that two of the three subjects decreased inappropriate behaviors during the social stories intervention condition. The third subject displayed such a low percentage of inappropriate behavior during baseline that minimal change was seen during the treatment, and initial decreases in inappropriate behavior were actually seen prior to implementation of the social story. In the discussion to this paper, the authors report that teachers were observed to provide prompts for behaviors related to the targets in the social stories. This additional variable, not controlled for in any way, completely invalidates the results of the study. This is a problem described by several authors. Treatment integrity was reportedly very high, although anecdotal reports appear to contradict this (e.g., one student was observed to be reading another student's story, a second student read the story multiple times per day, a third student was incredibly resistant to the story and refused it on several occasions). While the classroom staff may have attempted to implement the intervention consistently, the authors actually report quite a bit of variability in terms of frequency of contact with the stories.

Adams, Gouvousis, VanLue, and Waldron (2004) utilized a reversal design to evaluate the effectiveness of a social story intervention to decrease crying, falling, screaming, and hitting in a seven-year-old male with autism. One story was written, following the social story formula, in which the subject was encouraged to engage in behaviors intended to alleviate the motivating variables responsible for the target behaviors. For example, the story instructed the subject to ask for help or a break. Baseline and intervention data overlap with great variability for all four conditions with no demonstrable change in the dependent variables. Data on acquisition of the "replacement" behaviors of asking for help and requesting breaks would have been beneficial to this study given the lack of response to intervention for the behaviors targeted for reduction.

Delano and Snell (2006) utilized a multiple baseline across subjects research design to evaluate the use of social stories to increase the duration of social engagement and frequency of four separate appropriate social responses for three children with autism. This study employed peer confederates for the intervention (one peer for initial intervention and a second peer for generalization). Prior to baseline the authors conducted brief preference and academic assessments.

The reinforcer assessment was needed to identify preferred play activities for the intervention sessions. The academic assessments were conducted to evaluate the comprehension level of each subject to assist in development of the stories and to determine the most appropriate delivery method. The authors report that all stories adhered to the basic social story ratio suggested by Gray and Garand (1993).

Delano and Snell used a more innovative baseline method in which nonrelated stories were read to the subjects and confederates and a question and answer period followed in which comprehension questions were asked of the subjects. This procedure set the stage for a similar practice during intervention. During both baseline and intervention, after story time, the subject and confederate were allowed to play for 10 minutes. During this time, data were collected on the duration of a variety of social behaviors. Additional probe data were collected in the time immediately prior to story time. In addition to the unusual baseline, the authors actually programmed fading criteria for limiting the frequency of story sessions and conducted generalization probes with lesser known peers.

Visual analysis of the data indicates that the intervention was effective for one subject, with increases in social engagement increasing from about 50 seconds in ten minutes to 450 seconds throughout the treatment condition, and maintaining at about 200 seconds across the fading and generalization conditions. Data for the other two subjects appear to be far more

variable and therefore more difficult to interpret. One of the two remaining subjects demonstrated a steady increase in social engagement during the training condition, but fading and maintenance data are not as convincing as the first subject. Similar results are found with the third subject, with the exception that social engagement did not generalize to the novel peer. The steady increase in duration of social engagement is interesting and indicates that some other factor, such as increased reinforcement from the peer as a result of social engagement, may be influencing the target behavior. Additionally, the authors report that two of the three subjects (1 and 3) received additional discrete trial training on language and social skills.

Kuoch and Mirenda (2003) examined social stories without prompts for two subjects and compared social stories to prompts for a third subject. Subjects were between 3 and 6 years of age, representing some of the youngest subjects studied thus far. Three very different target behaviors were identified for each subject (i.e., aggression, spitting food out or other disruptive mealtime behaviors, and sharing/cheating), requiring three different social stories, one for each subject. For two subjects, an ABA design was used and for the third subject an ACABA design was used. The social story condition (B) consisted of the story being read by an adult sitting behind and to the side of the subject. No comprehension questions were asked. The target behavior was "corrected" by an adult if it occurred in the session time immediately following the social story. This correction procedure was in place during baseline.

The prompts condition (C) was designed in a manner intended to rule out the effects of individual attention that naturally accompanies reading a social story. The authors designed this condition so that a fiction story was read to the subject and then a prompt was delivered related to the target behavior. For this subject, the experimenters incorporated a prompt regarding the target behavior at the end of the reading of the social story as well.

Story construction for the first two subjects generally adhered to the social story guidelines, but the third story was generally more complex than recommended by Gray and Garand (1993). Visual analysis of the data for the two ABA subjects indicates a lack of experimental control as neither subject showed a reversal in responding rates when baseline was reintroduced. In addition, rates of the target behavior were already decreasing in the initial baseline for subject two before intervention began. Analysis of the data for subject three (ACABA) indicated that the prompts plus fiction story condition produced rates of responding similar to baselines one and two. Inappropriate behaviors reduced in the social story condition and remained low when the third baseline was introduced. Kuoch and Mirenda (2003 found that prompting alone was insufficient for behavior to change, however the prompts delivered were separated from the target behavior by time and space. The following section evaluates studies where reinforcement, another key variable in behavior analytic intervention, is added to the social stories protocol.

Crozier and Tincani (2007) examined the effectiveness of three different social story interventions for three preschool children with autism. Sitting appropriately during circle time, talking appropriately with peers during snack time, and increasing appropriate play (while decreasing inappropriate play) were addressed with three separate stories; one story (target behavior) per participant was evaluated. A simple reversal design (ABAB) was used for two participants and an ABCACBC design was used for the third. This design was chosen after the participant did not respond to the social story when presented alone.

Visual analysis of the data for each participant indicates that the authors were able to show that social stories alone increased engagement in target behaviors for two participants, however shortcomings should be noted. First, for the participant whose story addressed sitting nicely in circle, a slight uptrend in the behavior was observed in the initial baseline. However,

the behavior did increase dramatically and remained stable when the social story was implemented. However, the sitting behavior did not completely return to baseline levels during the reversal. In the case of the second participant who experienced a simple reversal design, increases in appropriate play (along with concurrent decreases in inappropriate play) were observed in the initial social story condition, however the behavior did not completely reverse and much higher rates of appropriate play weren't seen until the second social story alone condition. These results challenge the hypothesis that social stories alone could have been completely responsible for the behavior change observed.

The third participant experienced the ABCACBC design. For this subject, responding in the social story alone was almost identical to the initial baseline condition. The experimenters added prompts, delivering then to the participant on a variable interval schedule averaging about 2 prompts per minute. In a tenminute session approximately twenty prompts were delivered. Frequency of talking to peers increased to about five to six occurrences per session in this condition. A successful reversal followed, followed by a much more successful social story plus prompts condition (about 10 episodes of talking to peers per session were recorded). However this condition lasted only two sessions. The social story alone was attempted again, with baseline-like responding observed. A final social story plus prompts condition occurred, once again with only two sessions, with 4 and 8 episodes of the target behavior being recorded respectively.

This study does include a maintenance phase, where the experimenters trained the classroom staff on the social story intervention and turned the treatment over to the teachers. Data from two maintenance probes shows responding similar to the treatment condition for one of the three subjects. The other two subjects' data were much closer to baseline levels during the maintenance probes. Observations and questions from the experimenters showed that only one of the three students frequently accessed his story during the maintenance phase. This subject was the one for whom the maintenance data showed high rates of the target behavior.

This study adds to the social story literature by comparing social stories plus prompts to a condition without prompts. Further analysis is needed by the authors of this study to closely examine what it was about their subject that made the social story alone ineffective, when at least moderate results were seen for the other two subjects.

Kuttler, Smith Myles, and Carlson (1998) focused on decreasing precursors to tantrums in a single participant with autism. They used a reversal design in two different settings to evaluate the effects of the story on a variety of behaviors that had been observed to occur before tantrums. The authors report that tantrums were more likely to occur during transitions, when the subject had to wait, and during free time. While this is clearly not a comprehensive assessment, the authors did at least attempt to identify antecedent variables to the target behaviors.

Two different social stories were written that addressed appropriate behaviors for different times of day (morning work and lunchtime). The stories differ from the traditional story in that they identify a specific reinforcer for appropriate behavior during the activities identified in the stories. The authors do not report the length of observation sessions, however the data indicate a functional relationship between the social story intervention and the decrease in precursor behaviors. In fact, graphs for both settings (lunch and work time) show an immediate decrease in inappropriate behaviors to zero or near zero levels. Expected changes in behavior across conditions were seen for both reversals. These data question to what extent behavior change could be attributed to the story or to the reinforcement. One final

obvious limitation to this study- the use of only one subject- does present additional problems for external validity.

Barry and Burlew (2004) examined social stories as an intervention to increase play skills in two elementary students with autism. The authors measured the number of prompts required to get each student to engage in play skills and the duration of play time for each subject. A multiple baseline across subjects with three different treatment conditions design was used to evaluate the intervention (ABCD). In this study, social stories were not presented as a single intervention until the last phase. In Phases B and C varying levels of teacher intervention accompanied the social stories (prompts, practice, and praise). In Phase D, stories were available for the students to look at, and were read to the participants once each morning. Visual analysis of the data indicates that the intervention package was successful as the number of prompts required to start play decreased across conditions and duration of play increased across conditions.

The purpose of my present study was to evaluate the effects of a Social Story to teach self management of eating behavior of a child with autism that would also prevent her from choking.

Method

Participants

A girl child named Ola diagnosed as having autism disorder participated in the study. The child also had the following characteristics: (a) meet the full criteria for autism according to the Screening For autism Scale (Adel Abdullah, 2006), and (b) ability to follow directions .

During informal observations at mealtime , Ola exhibited some aversive, syndrome related characteristics, (Ledford & Gast, 2006), including food refusal and sensory-based eating problems. However, the main issue was that Ola stuffed her mouth with food when she was not watched and prompted to take small mouthfuls. Ola would put another piece of food in her mouth when her mouth was still filled with food. When her mouth was filled with too much food, Ola could not chew and gagged as a result.

Ola always had an adult (her teacher) next to her to control the amount of food she was putting into her mouth by either blocking the food on the plate with her hand or remove it so that it was impossible for Ola to grab another piece from the plate. The adult was also responsible to intervene when Ola gagged or choked by putting her finger into Ola's mouth to hook out the food that caused the problem.

Overfilling her mouth was not only unsafe, but for Ola it also resulted in three major social issues. Firstly she was not allowed to eat without adult supervision. This limited her independence and was quite intrusive. Secondly, she communicated the question to her "teacher" and indicated that she did not like it when the She was assisting her to eat, while her peers could eat without help. This was reinforced during observations when she indicated that she didn't want an adult with her because her peers didn't have an adult with them. Thirdly, the gagging and choking were unpleasant for her peers to experience when they were also eating, and they would isolate Ola by avoiding sitting close by whenever she was eating. It was clear that this way of eating socially isolated Ola and that a change in her eating habits was essential if she was to be socially included.

Instrument & Material

1. The Teacher 's rating of child's eating behaviour scale , a measurement instrument was specifically developed for the study to measure the autistic child's eating behaviour . The

scale consists of fourteen items . The teacher responses by indicating whether the child was (always - sometimes – rarely) doing this .

2. A Social Story was developed according to the guidelines determined by Carol Gray (1998).

The Social Story consisted of three pages. The first page was a title page with a photo of a child , showing the number 'one' with his index finger to indicate that he is learning to take one bite at a time. The story included the safety aspect (*I am taking one bite at a time so I eat safely*), as well as a social aspect (*My friends like it when I take small bites*).

Visual prompts and schedules are recommended to overcome a number of deficits among students with ASD, such as auditory processing, language use and understanding, organisation, understanding sequencing and memory while it relies on strengths typical of children with ASD, such as visual processing and understanding. Visual clues also present the material in a concrete and logical way (Ganz, 2007).

The written script consisted of five sentences. The sentences and the relation in which they were used followed Gray's guidelines . The Social Story had an introduction which stated the topic: 'Why is it good for me to take one bite at a time?' It contained a directive sentence: 'I am learning to take one bite at a time'; a perspective sentence: 'My friends like it when I take small bites'; an affirmative sentence: 'It is good to chew one small bite at a time' and a cooperative sentence: 'When I eat I will try to take small bites and swallow so my mouth is empty before I take the next bite'.

Design and statistical analysis

For the purpose of this study, pre- post – follow up design was used to examine the effectiveness of the social stories Intervention Strategy on self management eating behaviour of the target child.

Target Behaviour

The targeted behaviour was set after consultation with the parents and the teacher, and was chosen for both safety and social reasons. The desired behaviour was that the child would finish one mouthful before reaching out for another. The hypothesis was that this target behaviour would result in a safe and socially acceptable way of eating.

Procedure

The first researcher read the Social Story to the child every day before lunchtime started. The intervention took place over a period of fourteen days. The second researcher read the Social Story to the children to determine whether the desired behaviour would generalise. To determine whether generalisation would take place in a different environment, in this case the home, a copy of the Social Story was send home for the parents to read to the child before mealtimes.

Results

The present study addresses the following question: Does the use of the social stories intervention strategy have a positive effect on self management of eating behavior of the target child ?

Table 1 shows the differences between pre- and post testing , and between post and follow –up testing .

Table 1. *Results of Participants' Pre- and Post-Intervention , post- intervention and follow-up for Target Behavior*

Interventions	**Pre – intervention**	**Post- intervention**
Scores	16	46
Interventions	Post-intervention	Follow – up
Scores	46	45

Table 1 shows that there were statistically significant differences between pre- and post testing in eating behaviour of the target girl child in favor of the post testing , as the girl gains a high score on The Teacher 's rating of child's eating behaviour scale, compared to her score in pre testing . This is attributed to the use of social stories intervention strategy.

It also shows almost no difference between the girl's post and follow – up scores on The Teacher 's rating of child's eating behaviour scale, which indicates that the girl learnt the required target behaviour and maintained for a period of time (follow – up testing took place after 21 days from the post testing).

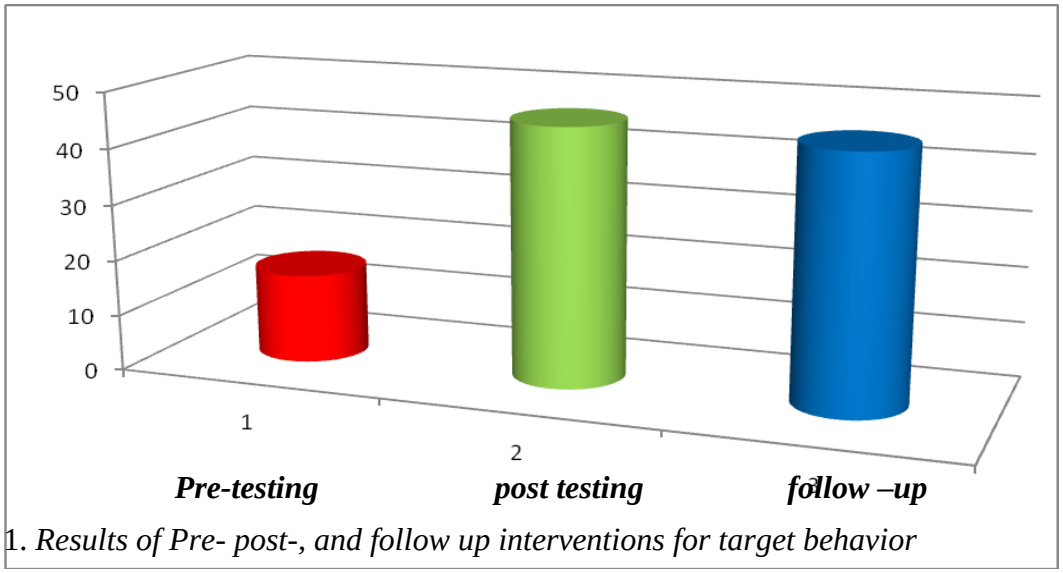

Figure 1. *Results of Pre- post-, and follow up interventions for target behavior*

Discussion

The purpose of my present study was to evaluate the effects of a Social Story to teach self management of eating behavior of a child with autism that would also prevent her from choking. Social stories are an increasingly popular tool for teaching social skills to children with autism by providing them with accurate social information. Previous research regarding the effectiveness of social stories technique Norris and Dattilo (1999), Romano (2002), Scattone et al., (2002), Bledsoe, Myles and Simpson (2003), Chalk (2003), Kuoch and Mirenda (2003), Adams et al. (2004) provide the rationalization for exploring the use of this technique for teaching self management of eating behavior of a child with autism.

Although it was supposed that her eating behaviour would improve gradually over time, the rapid and sudden change from the first day of the intervention was unexpected. The times when Ola reached out for another piece of food before finishing one mouthful decreased to between one and three percent.

This result goes in line with the study conducted by Bledsoe, et.al. (2003) which investigated the use of a Social Story as the sole intervention to improve the mealtime skills of an adolescent with Asperger syndrome, also showed significant changes within the first week after the intervention was put in place. Bledsoe, et.al. referred to the observations of Gray and Garand in 1993 and stated "...when Social Story interventions are effective the results are typically apparent within the first week" (p.293).

There are a number of possible reasons for the rapid change in Ola's behaviuor: The teacher suggested that the influence of her peers played an important role to bring about this change. When the photos for the Social Story were taken on day four before the intervention, the peers asked questions and were told that the photos were taken to develop a story for Ola to help her with her eating. They were alerted that some intervention was going to be put in place.

Another possible reason for the sudden change may be that when the Social Story was put up on the wall above Ola's desk, the peers showed a great interest in it and the teacher observed that they talked a lot about it; both to Ola and among themselves. These conversations were quite positive and they committed themselves to assure that the intervention was going "to work". The teacher expressed the view that the expectations that the peers had, that Ola's way of eating was going to become more acceptable, played a very important role. It seems that this positive peer pressure to expect Ola to eat in a socially acceptable way was an additional motivation for Ola to comply.

A third possible reason for this sudden change was clearly the powerful message that the first photo in the Social Story carried: 'One bite at a time'. Whenever Ola saw me at school, she indicated 'one bite at a time' by showing 'one' with the index finger of her right hand. As the intervention developed, it seemed as if this simple gesture summarized the whole message to eat safely. After the intervention phase, this is still the gesture that she makes when going out for having food, or when she sees me at school.

Conclusion

In this present study, pre- post- follow up design was used to examine the effectiveness of the social stories Intervention Strategy on the eating behaviour of the target child. Data showed that the Social Story was successful in changing the eating behaviour.

Limitations

The girl was taught to eat appropriately using social stories strategy when there were no other children present. In order to learn to eat appropriately, she should have been taught to eat while she was among other children. This will help her to be more sociable. Another limitation was that the researchers were not sure whether the parent at home was implementing the intervention or not. It was useful to ask the parent through a self report scale, or an interview.

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Facial emotion recognition in children with autism and their typically developing Peers

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Abstract

Facial emotion recognition was investigated in children with autism and their typically developing peers. Participants consisted of 8 children who were previously diagnosed with High Functioning Autism (HFA). HFA is defined by a significant impairment in all three areas of the DSM-IV diagnostic triad of social, behavioral, and communicative, deficits (American Psychiatric Association, 2000) without co-occurring mental retardation. Eight control participants were matched on chronological and a standard score equivalent of Verbal Mental Age. No significant differences were found between groups in terms of chronological age and IQ. Participants were tested in the multi media room, where a video tape was attached to the television set . Results indicated that typically-developing children were able to correctly identify "sad", "anger", and "fear" stimuli earlier than children with autism. For "happy" stimuli, participants with autism were able to identify each expression as accurately as the control children for all emotions except for "fear."

Key Words: *Facial emotion recognition, Children with autism, typically developing peers*

Introduction

Autism is a disorder characterized by impairments in social and communicative behavior and a restricted range of interests and behaviors. Although there is great variability in symptom severity and intellectual functioning among individuals diagnosed with the disorder, all individuals with autism have difficulties in social interaction such as use of eye contact, engaging in reciprocal interactions, and responding to the emotional cues of others. Basic impairments, such as lack of attention to others and failure to orient to name, often appear within the 1st year of life (Werner, Dawson, Osterling, & Dinno, 2000). By age 2 to 3, impairments are evident in social orienting, eye contact, joint attention, imitation, responses to the emotional displays of others, and face recognition (Dawson, Carver, et al., 2002; Dawson, Meltzoff, Osterling, Rinaldi, & Brown, 1998; Dawson, Toth, et.al., 2004; Mundy, Sigman, Ungerer, & Sherman, 1986; Sigman, Kasari, Kwon, & Yirmiya, 1992).

The ability to recognize and accurately interpret nonverbal social cues, such as detecting emotion from facial expressions, is critical for effective social communication. Facial affect communicates internal emotional states and serves as a vital source of information in reciprocal social exchanges. Children's ability to recognize facial expressions develops prior to the first two years of life (Nelson, 1987), and matures with age depending on the emotion (Durand, Gallay, Seigneuric, Robichon, & Baudouin, 2007; Herba, Landau, Russell, Ecker, & Phillips, 2006; Widen & Russell, 2008). By 5 years of age, typically developing children recognize happiness and sadness with adult accuracy; and by 11 years of age, children recognize more complex emotions such as fear, anger, neutrality, and disgust (Durand et al., 2007). However, the ability to accurately detect emotion is not evenly distributed across children and may be one factor that accounts for awkward social interactions.

Numerous studies reported significantly lower performance on emotion recognition tasks for individuals with ASD compared to their typically developing (TD) controls. This is true for both children and adults with ASD: all age groups show difficulties in recognizing and labelling facial expressions (Pelphrey et al. 2002; Tantam et al. 1989). Exploring whether impaired facial expression processing occurs for all basic emotions or only for single emotions in particular, Humphreys et al. (2007) tested adults with autism with an emotion identification task and detected considerable differences between groups for all emotions. Discrepancies were most apparent for fear, disgust, and happiness. In a study with children

with autism Wright et al. (2008) identified anger and happiness as the most challenging emotions to be recognized from a face.

From the time when autism was first identified (Kanner, 1943), emotional deficits have been a primary diagnostic criterion. Many studies have examined the ability of both children and adults with autism to recognize common categories of facial expression (e.g. Hobson, 1986; Weeks & Hobson, 1987; Hobson et al., 1988; Ozonoff, Pennington, & Rogers 1990; Capps, Yirmiya, & Sigman, 1992; Davies, Bishop, Manstead & Tantam, 1994; Gepner, Deruelle, & Grynfeltt, 2001). Despite this impressive body of literature, it remains unclear to what extent deficits in the ability to perceive facial expression contributes to the difficulties individuals with autism have regarding social interactions. In fact, it is still unclear whether individuals with autism truly have a deficit in recognizing emotional expression in faces. Some studies suggest the ability is intact (e.g Braverman, Fein, Lucci & Waterhouse, 1989; Davies, Bishop, Manstead, & Tantam, 1994; Gepner, Deruelle, & Grynfeltt, 2001; Ozonoff, Pennington, & Rogers, 1990), while others suggest it is impaired, relative to controls (Dawson, Meltzoff, Osterling & Rinaldi, 1993; Gepner, de Schonen, & Buttin, 1994; Hobson, 1986 ; Hobson et al.,1988; Loveland et al. 1997; MacDonald et al. 1989; Sigman, Ungerer, Mundy, & Sherman, 1987; Teunisse & de Gelder, 2001). One possible reason for mixed results in autism emotion recognition research are methodological differences across studies. Studies have used different experimental procedures including sorting, matching, and identification. These methodological differences have led to several debates in the literature (e.g. Celani, Battacchi, & Arcidiacono, 1999).

One of the reasons these methodological issues are important is because, with some matching tasks used, it may be possible for individuals with autism to use compensatory strategies by matching on a simple perceptual cue as opposed to a true recognition of facial expression (Celani et al, 1999). A similar concern was raised by Baron-Cohen, Spitz, & Cross (1993) in discussing the finding that individuals with autism were able to perceive both happy and sad expressions but not surprise. It may be that happy and sad are perceived by simple distinctive, differences in the mouth, whereas surprise may require more attention to the overall face, including the eyes. Attention to only one feature, such as the mouth, can be accomplished using simple featural processing, while simultaneous multiple-feature processing may require a more configural or holistic approach.

The present study hypothesized that

1- There will be differences in ability to recognize facial expression of the emotion “sad” between participants with autism and controls.

2- There will be differences in ability to recognize facial expression of the emotion “ angry ” between participants with autism and controls.

3- There will be differences in ability to recognize facial expression of the emotion “afraid” between participants with autism and controls.

4- There will be differences in ability to recognize facial expression of the emotion “happy” between participants with autism and controls.

Methods

Participants

Participants consisted of 8 children who were previously diagnosed with High Functioning Autism (HFA) . HFA is defined by a significant impairment in all three areas of the DSM-IV diagnostic triad of social, behavioral, and communicative, deficits (American Psychiatric Association, 2000) without co-occurring mental retardation. High functioning

children were chosen for this study because this allows for the examination of impairments that are specifically associated with autism rather than with mental retardation (Minshew, Goldstein, & Siegel, 1997). The age range of seven to nine was chosen in order to fill a gap in the literature; no face processing data exists regarding children in this age group. Diagnosis of HFA was confirmed by administration of the Autism Spectrum Disorder Evaluation Inventory (Adel Abdulla, 2006). Eight control participants were matched on chronological and a standard score equivalent of Verbal Mental Age . No significant differences were found between groups in terms of chronological age and IQ.

Materials

Approximately 30 digital videos were made of males and females ranging in age from 18-50 years. These photos modeled the facial expressions of "happy", "sad", "anger", and "fear."

Procedures

Participants were tested in the multi media room, where a video tape was attached to the television set . In order to ensure that participants could accurately identify the facial expressions of happy, sad, anger, and fear, a pretest was given using 12 stimuli (three of each emotion) . All participants accurately identified 100% of the pretest stimuli. Following pretest, participants were given the following instructions prior to the test phase. "This is a game where you are going to look at people's faces and try to guess what they are feeling. You are going to see movies of people's faces, and your job is to tell me how that person is feeling. First you are going to see a yellow ball on the screen and you need to look at the ball very closely, because the movies are going to be really fast…like this (snap fingers), and then you won't see them anymore. For each face you can choose from these (present iconic faces): "happy", "sad", "anger", "fear", or "none." OK? Let's practice first. In some of the movies it will be easy to tell what the person is feeling, like this one (present sample "happy" clip,), and some of them are going to be hard, like this one (present sample "happy" clip). Ready to start?"

Participants were then shown the video clips of each emotion in randomized order. After all clips were seen, each of the successive photos were shown, with randomization within each level. After the (approximately) two second presentation of a clip, the screen went blank. At that point, participants were asked to identify the emotion they thought they saw on the clip. They were presented with papers (i.e. "smiley faces") of "happy", "sad", "anger", "fear", or "no emotion."

Results

1- H1: There will be differences in ability to recognize facial expression of the emotion "sad" between participants with autism and controls.

Results indicated that control participants were significantly better than participants with autism at recognizing featural cues of "sad" (See figure 1) .

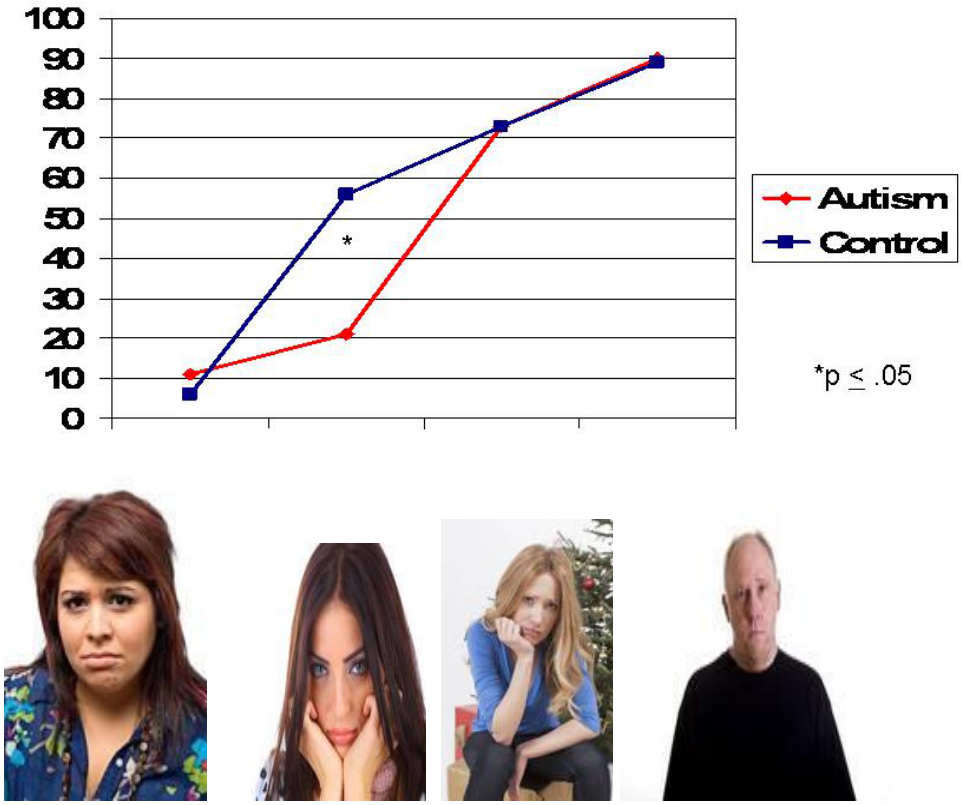


Figure 1. *Differences in ability to recognize facial expression of the emotion "sad" between participants with autism and controls.*

2- H2: There will be differences in ability to recognize facial expression of the emotion " angry " between participants with autism and controls.

Control participants were significantly better than participants with autism at recognizing featural cues of "angry" (See figure 2)

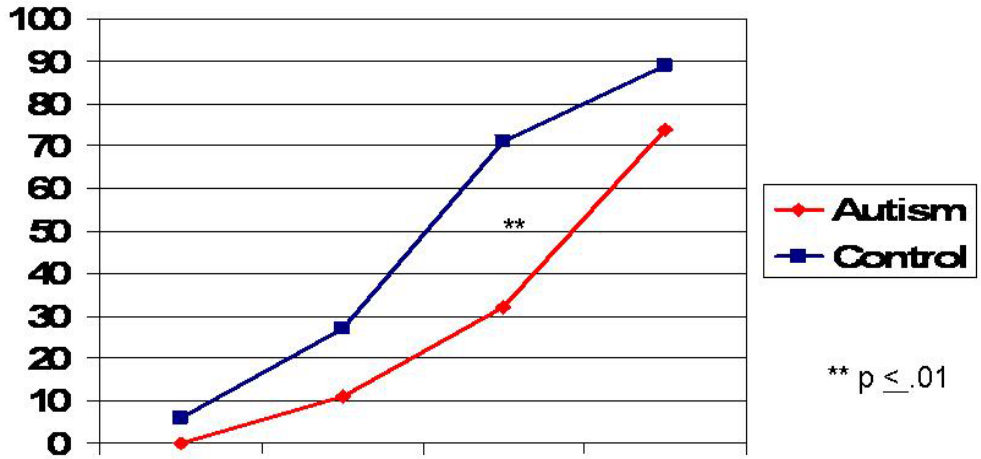
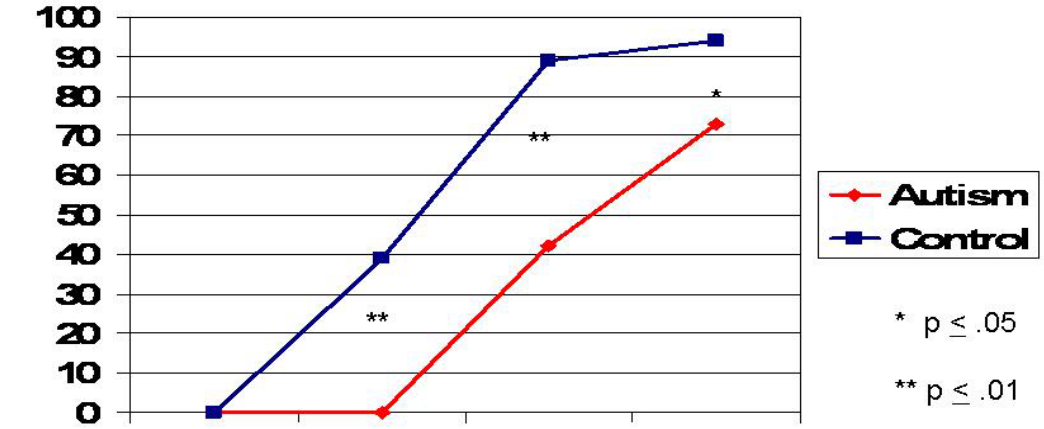


Figure 2. *Differences in ability to recognize facial expression of the emotion "angry" between participants with autism and controls.*

3- H3: There will be differences in ability to recognize facial expression of the emotion "afraid" between participants with autism and controls.

Control participants were significantly better than participants with autism at recognizing featural cues of "fear" (See figure 3)



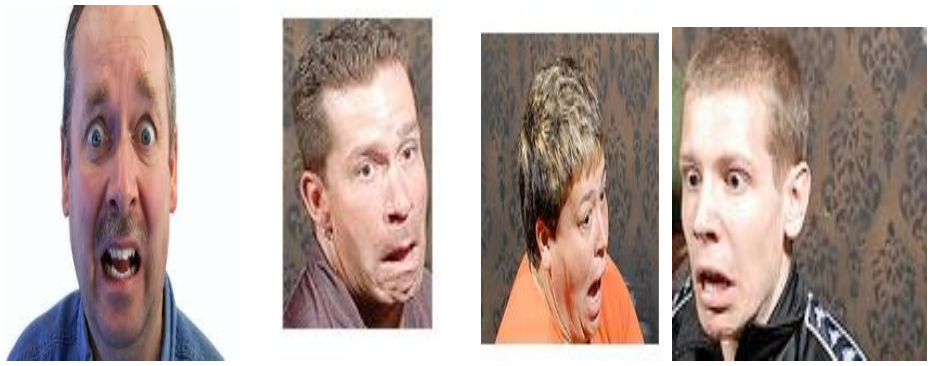


Figure 3. *Differences in ability to recognize facial expression of the emotion "afraid" between participants with autism and controls.*

4- H4 : There will be differences in ability to recognize facial expression of the emotion "happy" between participants with autism and controls.

All of the control participants and participants with autism correctly identified the face stimuli at this level.

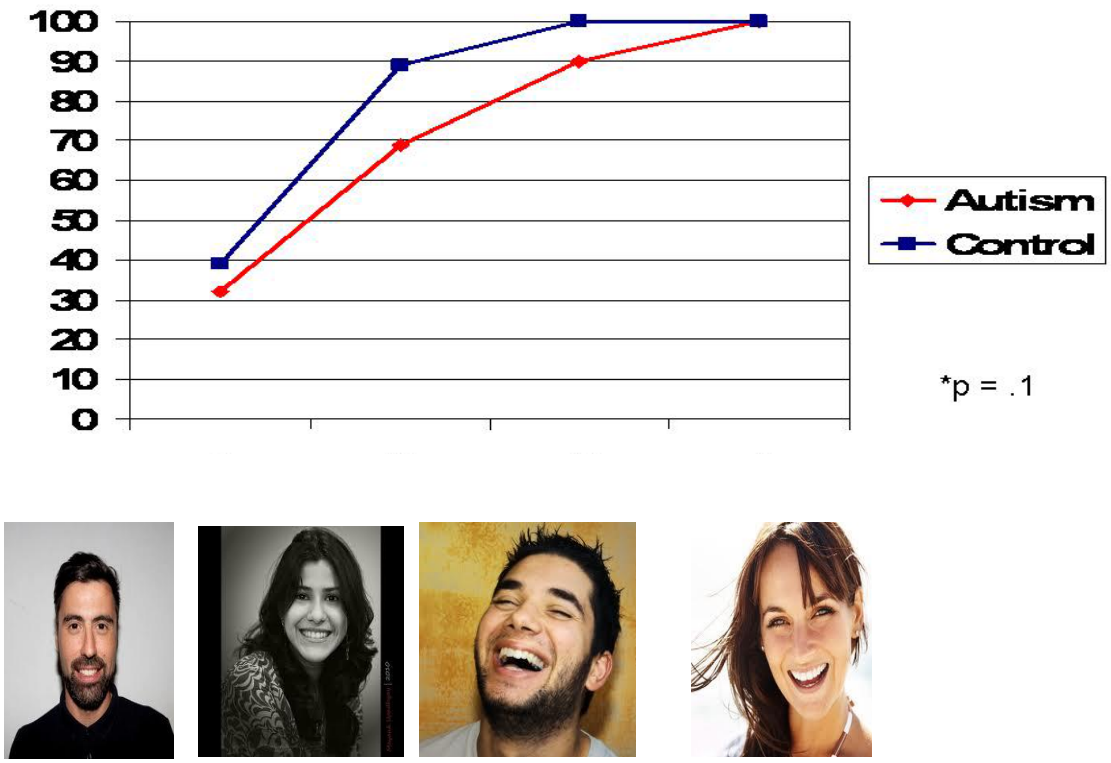


Figure 4. *Differences in ability to recognize facial expression of the emotion "happy" between participants with autism and controls.*

Discussion

This study examined facial affect recognition abilities in children with autism compared to their typically developed peers. Typically-developing children were able to correctly identify "sad", "anger", and "fear" stimuli earlier than children with autism. For "happy" stimuli, participants with autism were able to identify each expression as accurately as the control children for all emotions except for "fear."

Differences in performance between groups of participants may have occurred due to a configural processing deficit thought to be present in autism. But later on, performance became statistically equivalent in three out of four emotions ("happy", "sad", and "angry"), and this demonstrated ability of participants with autism to identify exaggerated expression as well as control children may have occurred because when exaggeration occurs, it becomes easier to focus on individual facial features to extract emotion information. More subtle expressions, on the other hand, require attention to, and integration of, smaller cues. For one emotion, "happy", no significant differences were found between groups, and both groups were at ceiling (100% accuracy).

This result may have occurred because "happy" is easier to identify using only one feature, the mouth, as compared with the other three emotions in this experiment, which require integration of information from both the mouth and the eyes.

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The Effectiveness of a Metacognitive Strategy Training Program in Improving Reading Comprehension Skills of Learning Disabled Grade-Five Students

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Abstract

This study describes an action research project designed to improve reading comprehension skills of fifth grade learning disabled students. A total of 60 students identified with LD were invited to participate. The sample was randomly divided into two groups; experimental (n= 30 boys)and control (n= 30 boys). ANCOVA and Repeated Measures Analyses were employed for data analysis. Findings from this study indicated the effectiveness of the program employed in improving reading comprehension skills in the target students. On the basis of the findings, the study advocated for the effectiveness of the metacognitive strategy training program in improving the reading skills of Learning disabled students.

Keywords. Metacognitive strategy training program, learning disabilities. primary Education, Reading comprehension skills.

Introduction

Metacognition (Flavell 1979; Kuhn 2000; Veenman 1993 ; O'Neil and Abedi 1996, Mourad Ali, 2009,2010) refers to two aspects, namely the students' self-awareness of a knowledge base in which information is stored about how, when, and where to use various cognitive strategies and their self-awareness of and access to strategies that direct learning (e.g. monitoring difficulty level, a feeling of knowing). This awareness is developmental and lies on a continuum. Proficient readers use one or more metacognitive strategies to comprehend texts. There are three main aspects of metacognition: metacognitive knowledge, metacognitive monitoring, self regulation and control (Pintrich, Wolters and Baxter 2000). The first group consists of cognitive learning strategies which the learner uses to regulate the process of knowledge acquisition. These include, for example, elaboration strategies such as the building of links to prior knowledge, or memory strategies such as note taking. The second group consists of metacognitive control strategies. Central here are activities like the planning and monitoring of learning activities, the evaluation of learning outcomes and the adaptation to varying task demands and (unexpected) difficulties, for example, an increase in directed efforts. In addition to these two groups, which are dominant in research and crucial for the learning process, a third group of strategies in the model developed by Pintrich and Garcia (1994) is dedicated to resource management. These strategies are concerned with the control of the general conditions associated with learning, for example, time management and management of the learning environment.

The following two key questions students need to ask themselves are crucial in terms of metacognitive awareness and knowledge:

1. What do I want out of this? (What are my motives?)

2. How do I propose going about getting there? (What are my strategies?)

(Biggs & Moore 1993).

Another important metacognitive model set forth by Winne and Hadwin (1998) has four basic stages: task definition, goal setting and planning, enactment, and adaptation. Their model suggests that the learner generates a perception of what the task is and the available resources, constructs a plan for addressing the task, enacts study strategies, and makes changes to his or her cognitive structure based on perceptions of performance. Pintrich (2000) synthesized the work of a variety of self-regulation theorists into a general framework which includes:

(a) forethought, planning and activation;

(b) monitoring;

(c) control; and

(d) reaction and reflection.

Pintrich's model suggests that the learner develops perceptions of the task demands, engages in metacognitive monitoring, selects and implements cognitive strategies that are appropriate for the task demands, and evaluates task performance while reflecting on the effectiveness of the cognitive strategies. These models all suggest an interaction between personal factors and situational factors such as task and test demands, the coordination of goal setting and metacognition, the use of cognitive learning strategies, and self reflection.

Metacognition and reading

Research in the area of reading has also begun to focus on the role of metacognition. While previous research has focused on strategy use, researchers are examining readers' awareness of strategies during the reading process - their metacognitive awareness. Metacognition is a relatively new label for a body of theory and research that addresses learners' knowledge and use of their own cognitive resources (Garner, 1987). Metacognitive knowledge or awareness is knowledge about ourselves, the tasks we face, and the strategies we employ (Baker & Brown, 1984). Knowledge about ourselves may include knowledge about how well we perform on certain types of tasks or our proficiency levels. Knowledge about tasks may include knowledge about task difficulty level. For example, in the area of reading, we may know that familiar-topic material is easier to understand than unfamiliar material; explicit sentences assist us in tasks that require reduction of texts to their gists. About strategies, we may know that verbal rehearsal and elaboration of material assist in retrieval, or that prediction of article content based on titles improves comprehension, and so forth. Metacognitive awareness therefore, also involves the awareness of whether or not comprehension is occurring, and the conscious application of one or more strategies to correct comprehension (Baumann, Jones, & Seifert-Kessel, 1993).

Researchers (Bazerman, 1985; Pressley & Afflerbach, 1995) demonstrate that successful comprehension does not occur automatically. Rather, successful comprehension depends on directed cognitive effort, referred to as metacognitive processing, which consists of knowledge about and regulation of cognitive processing. During reading, metacognitive processing is expressed through strategies, which are "procedural, purposeful, effortful, willful, essential, and facilitative in nature" and "the reader must purposefully or intentionally or willfully invoke strategies" (Alexander & Jetton, 2000, p.295), and does so to regulate and enhance learning from text. Through metacognitive strategies, a reader allocates significant attention to controlling, monitoring, and evaluating the reading process (Pressley, 2000; Pressley, Brown, El- Dinary, & Afflerbach, 1995).

Poor readers are less aware of effective strategies and of the counterproductive effects of poor strategies, and are less effective in their monitoring activities during reading. Brown and Palincsar (1985) suggested that an effective reading instruction program should require the identification of complementary strategies that are modeled by an expert and acquired by the learner in a context reinforcing the usefulness of such strategies. Adult and college readers who show evidence of metacognitive deficiencies may be considered as unaware and incapable of monitoring their mental processes while reading. Unskilled reading comprehension is one aspect to show the importance and need for training (Cohen, 1986). Unskilled readers can become skilled readers and learners of whole text if they are given instruction in effective strategies and taught to monitor and check their comprehension while reading. With respect to this point, Al Melhi (2000) has found that some differences do exist

between skilled and less skilled readers in terms of their actual and reported reading strategies, their use of global reading strategies (such as underlining guessing, reading twice and etc), their metacognitive awareness, their perception of a good reader, and their self-confidence as readers. Training in metacognitive language learning strategies help learners develop their reading skills and raise their language proficiency levels (Palincsar, 1986; Green & Oxford, 1995; Carrell, Gajdusek & Wise; 1998).

So the present study addresses the following questions:

1- Are there differences in post–test scores mean between control and experimental groups on comprehension test?

2- Are there differences in post–test scores mean between control and experimental groups on word recognition test ?

3- If the programme is effective in improving reading comprehension of experimental group, is this effect still evident a month later?

4- If the programme is effective in improving word recognition skill of experimental group, is this effect still evident a month later?

Method

Participants

60 students participated in the present study. Each student participant met the following established criteria to be included in the study: (a) a diagnosis of RD by teacher's referral. Neurological scanning results indicated that those individuals were neurologically deficient (b) an IQ score on the Mental Abilities Test (Mosa, 1989) between 90 and 118 (c) reading performance scores at least 2 years below grade level (d) absence of any other disabling condition. Students were randomly classified into two groups: experimental (n= 30 boys) and control (n= 30 boys).

The two groups were matched on age, IQ, word recognition and reading comprehension. Table 1.shows means, standard deviations, t-value, and significance level for experimental and control groups on age (by month) ,IQ , word recognition and reading comprehension (pre-test).

Table 1. means, standard deviations, t- value , and significance level for experimental and control groups on age (by month),IQ, word recognition and reading comprehension (pre-test).

Variable	Group	N	M	SD	T	Sig.
Age	Experimental	30	132.24	1.96	-.121	Not sig.
	Control	30	132.41	2.01		
IQ	Experimental	30	111.34	4.45	-.221	Not sig.
	Control	30	111.89	4.24		
Word recognition	Experimental	30	6.21	3.00	-.547	Not sig.
	Control	30	6.67	3.52		
Reading comprehension	Experimental	30	6.82	2.65	-.539	Not sig.
	Control	30	6.54	2.32		

Table 1. shows that all t-values did not reach significance level. This indicated that the two groups did not differ in age , IQ , word recognition and reading comprehension (pre-test).

Instrument

a. Word recognition test.The test was developed to assess reading disabled children 's skills in word recognition . It was based on the features of word recognition realized by Mourad Ali (2005, 2006, 2007a) , and Mourad Ali's Basic Reading Skills Test (2007b) . The test consists of (22) items assessing word recognition, with score ranging from 0-1 on each item and a total score of 22. The test has demonstrated high internal consistency with Cronbach's α ranging from 0.83 to 0.87.

b. Reading comprehension test. The test was developed to assess reading disabled children 's skills in reading comprehension . It was based on the features of comprehension skills recognized by Mourad Ali (2005, 2006, 2007a) , and Mourad Ali's Basic Reading Skills Test (2007b). The test consists of (22) items assessing word recognition, with score ranging from 0-1 on each item and a total score of 22. The test has demonstrated high internal consistency with Cronbach's α ranging from 0.86 to 0.89.

Setting

The study took place in a primary school in Baltim sector, Kafr El Sheik Governorate, Egypt. The target students were taught in "Technology Room"

Procedure

Screening : 60 students participated in the present study. Each student participant met the following established criteria to be included in the study: (a) a diagnosis of RD by teacher's referral. Neurological scanning results indicated that those individuals were neurologically deficient (b) an IQ score on the Mental Abilities Test (Mosa, 1989) between 90 and 118 (c) reading performance scores at least 2 years below grade level (d) absence of any other disabling condition. Students were randomly classified into two groups: experimental (n= 30 boys) and control (n= 30 boys).

Pre-intervention testing : All the sixty students in grade five completed Cognitive Reading Comprehension Test, which assesses reading disabled children 's skills in reading comprehension. Thus data was reported for the students who completed the study.

General Instructional Procedures: Experimental – group students were taught in the "Technology Room" at EL Waheba primary school after the school day ended. The instructor gave students an idea about the metacognitive training and how it is useful in helping them achieve their lessons in different school subjects in general , and in reading skills in particular In each class hour they were taught two metacognitive strategies and they applied them to the passages.

Design and Analysis

The effects of implementing the metacognitive training program on students' reading comprehension skills were assessed using pre- post- and follow –up testing.

Results

Table 2. shows data on ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in reading comprehension test. The table shows that the (F) value was (128.009) and it was significant value at the level (0.01).

Table 2. *ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in comprehension test*

Source	Type 111 sum of squares	df	Mean square	F	Sig.
Pre	1.725	1	1.725		
Group	217.276	1	217.276	128.009	0.01
Error	317.340	57	5.567		
Total	1067.933	59			

Table 3. shows T. test results for the differences in post- test mean scores between experimental and control groups in reading comprehension test. The table shows that (t) vale was (11.67). This value is significant at the level (0.01) in the favor of experimental group. The table also shows that there are differences in post- test mean scores between experimental and control groups in comprehension test in the favor of experimental group.

Table 3. *T- test results for the differences in post- test mean scores between experimental and control groups in comprehension test*

Group	N	Mean	Std. deviation	T	Sig.
Experimental	30	13.50	1.10	11.67	0.01
Control	30	6.43	3.12		

Table 4. shows data on ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in word recognition test. The table shows that the (F) value was (246.608) and it was significant value at the level (0.01).

Table 4 . *ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in word recognition test*

Source	Type 111 sum of squares	df	Mean square	F	Sig.
Pre	10.148	1	10.148		
Group	401.575	1	401.575	246.608	0.01
Error	92.818	57	1.628		
Total	648.983	59			

Table 5. shows that (t) vale was (17. 53). This value is significant at the level (0.01) in the favor of experimental group . The table also shows that there are differences in post-test mean scores between experimental and control groups in word recognition test in the favor of experimental group .

Table 5 . *T-test results for the differences in post- test mean scores between experimental and control groups in word recognition test*

Group	N	Mean	Std. deviation	T	Sig.
Experimental	30	13.200	1.349	17. 53	0.01
Control	30	7.166	1.315		

Table 6. shows data on repeated measures analysis for reading comprehension test. The table shows that there are statistical differences between measures (pre- post- sequential) at the level (0.01).

Table 6 . *Repeated measures analysis for comprehension test.*

Source	**Type 111 sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Between groups	661.250	1	661.250		0.01
Error 1	105.611	58	1.821	363.148	
Between Measures	794.978	2	794.978	193.121	0.01
Measures x Groups	596.933	2	298.467	145.011	0.01
Error 2	238.756	116	2.058		

Table 7. shows data on Scheffe test for multi-comparisons in reading comprehension test.The table shows that there are statistical differences between pre and post measures in favor of post test , and between pre and follow up measures in favor of sequential test , but no statistical differences between post and sequential test .

Table 7. *Scheffe test for multi- comparisons in comprehension test*

Measure	**Pre M= 6.76**	**Post M= 13.20**	**Sequential M= 12.86**
Pre	--	--	--
Post	8.43*	--	--
Sequential	8.10*	.33	--

Table 8. shows data on repeated measures analysis for word recognition test. The table shows that there are statistical differences between measures (pre- post- sequential) at the level (0.01).

Table 8 . *Repeated measures analysis for word recognition test*

Source	**Type 111 sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Between groups	1150.139	1	1150.139	348.305	0.01
Error 1	191.522	58	3.302		
Between Measures	1019.478	2	509.739	164.199	0.01
Measures x Groups	469.078	2	234.539	75.550	0.01
Error 2	360.111	116	3.104		

Table 9 shows data on Scheffe test for multi-comparisons in word recognition test. The table shows that there are statistical differences between pre and post measures in favor of post test , and between pre and sequential measures in favor of sequential test , but no statistical differences between post and sequential test.

Table 9. *Scheffe test for multi- comparisons in word recognition test*

Measure	**Pre M= 5.76**	**Post M=13.50**	**Sequential M= 12.83**
Pre	--	--	--
Post	8.73*	--	--
Sequential	8.06*	.66	--

Discussion

The main objective of the present study was to explore whether there were differences in post–test scores mean between control and experimental groups on reading comprehension skills. The study also examined If the programme was effective, if this effect was still evident a month later.

The results of this study show that the metacognitive program was effective in improving the reading comprehension skills of students in experimental group, compared to the control group whose individuals were left to be taught using traditional methods.

Participants of this study fall into the minimum IQ of 90, nevertheless, they have learning disability. Thus IQ score cannot account for learning disabilities. The results of the present study support that conclusion with evidence that students who participated in the study do not fall into the low IQ range, however they have learning disabilities. When designing a program based on metacognitive strategiy, they had statistical increase in reading comprehension skills. This goes in line with what Mourad Ali et al (2006) notes that there is one problem " students who are identified as learning disabled often cover any special abilities and talents, so their weakness becomes the focus of their teachers and peers , ignoring their abilities. Mourad Ali (2007a) , however , notes that " learning disabled , as well as gifted students can master the same contents and school subjects ", but they need to do that in a way that is different from that used in our schools .

Experimental group gained better scores in comprehension tests than did control groups in post-tests though there were no statistical differences between the two groups in pre- test. This is due to the program which met the experimental group's needs and interests. On the contrary, the control group was left to be taught traditionally. This goes in line with our adopted perspective which indicates that traditional methods used in our schools do not direct students as individual toward tasks and materials, and do not challenge their abilities. This may lead students to hate all subjects and the school in general. On the contrary, when teachers adopt new methods (such as metacognitive strategy) that suits students interests and challenge their abilities with its various modalities .

This indicates that as Mourad (2009) sates " as we learn more about the scope and complexity of individual differences and how they affect academic progress, we become increasingly convinced that many individuals who do not read well do not because the instructional methods used to teach them does not complement preferred styles to learn, thus, we should seek strategies that help these students and match their strengths.

Worth mentioning is that students in the experimental group retained the learnt information for a long time even after the period of the program finished, and this indicates the training effect.

Implications

Metacognitive strategy training theory has some very important implications for both teachers and students. Teacher may have a preferred teaching style. He may regard this style as the best , but if he wants to innovate , he should use various teaching styles . Using various teaching styles and strategies will help meet the needs of the diverse students inside the classroom .These teaching styles and strategies should suit students' diverse abilities and attitudes. That is what Metacognitive strategy training does. It provides teachers with interesting styles that can be used with different students in different lessons.

Students with learning disabilities may have special abilities that do not emerge in the traditional educational system. By using metacognitive strategy training in the classroom , students will be able to display their strengths and interests.

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The Effect of Bibliotherapy Intervention Program on Self Esteem of Gifted Primary School Children

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Abstract

The purpose of this study was to explore the effect of bibliotherapy intervention program on self esteem of gifted primary school children. A total of 67 primary school children participated in the present study. Participants met the criteria for giftedness by using Scales for Rating the Behavioral Characteristics of gifted children (Mourad, In this Volume). Children were randomly classified into two groups: experimental (n= 34 , 20 boys , 14 girls) and control (n= 33 , 21 boys and 12 girls). ANCOVA and Repeated Measures Analyses were employed for data analysis. Findings from this study indicated the effectiveness of the program employed in self esteem in the target children. On the basis of the findings, the study supports the idea of bibliotherapy as a powerful intervention for children

Keywords. bibliotherapy, Gifted primary school children , self esteem .

Introduction

Bibliotherapy is a strategy of helping students deal with issues in their lives. Bibliotherapy can help students become aware of many issues such as: self-esteem, interactions with others, problem solving and emotional issues (Stamps, 2003; Prater, 2006). Bibliotherapy is broken down into four stages by Stamps (2003):

1. Identification – Identify the problem. Choosing the book and matching it to the students' situation is the most important thing. The students must be able to see their situation in the story (Sridhar and Vaughn, 2000).
2. Catharsis – The student identifying with the character
3. Insight – Students apply the situation addressed by the book's character to their own situation. A positive reaction may happen in this phase.
1. Universalization – This is known as "putting yourself in someone else's shoes." Hopefully students can see that all people have problems.

Through all of these stages the teacher should discuss the chosen issue and share helpful coping strategies or problem solving strategies with the student or students. This method lends itself to much questioning, and the teacher must carefully and thoughtfully ask questions that will help the student (Stamps, 2003; Sridhar and Vaughn, 2000).

Bibliotherapy can also engage students in reading and can be used as a strategy to interest students in books. Reading through bibliotherapy can increase students' literacy skills while helping them to cope and understand their own personal issues (Prater et al., 2006) .Prater et al. (2006) created a ten-step strategy plan to help teachers in implementing bibliotherapy in the classroom setting. The steps are

1. Develop a rapport, trust and confidence with the student. Students must trust those who are trying to work through their issues. The trust and rapport that the teacher builds with the students opens channels of discussion and reform.
2. Identify other school personnel who can assist. Schools are full of people who are willing to help students. Those people might include; the school psychologist, the school nurse, the principal, other teachers, aides, special educators, etc.
3. Solicit support from the students' parents or guardians. The students' parents are a critical component. They lend support and can reinforce the issues being addressed. In my opinion, parents or guardians need to be trained in bibliotherapy and also need to be aware of each teaching situation they are providing for their child.

4. Define a specific problem the student is experiencing. Teachers may also need to research certain issues and strategies for dealing with them.

Benefits of Bibliotherapy

Bibliotherapy provides more than just a therapeutic comfort for those who participate Prater et al. (2006) lists five benefits of bibliotherapy. First books help students bring problems to the forefront so that they are able to deal with them (Prater et al., 2006). Through the story's plot, isteners are able to gain insight into their own life situation, while developing their creative and critical thinking skills (Berns, 2004). After reading it is easy for a facilitator to initiate and stimulate discussion about the problems introduced in the story (Prater et al., 2006). A study by Amer (1999) found that children discussed their experiences more freely after reading a therapeutic book. Fiction is an important tool to assist children in opening up about their own feelings (Amer, 1999).

Inman et al. (2000) also discovered that even students who have difficulty verbalizing their thoughts and feelings were better able to open up and discuss with their facilitator their ideas after a bibliotherapy session. Secondly, bibliotherapy helps students channel their life circumstances through a fictional character. Students can safely analyze their own thoughts and behaviors as they identify "with characters in books who are dealing with difficulties similar to their own" (Prater et al., 2006, p. 6). By working through a book students are able to gain distance from their own affect and are able to focus outside of themselves making it easier to express their thoughts, ideas, and feelings (Berns, 2004). By utilizing the story's characters students are able to identify similarities and differences and reflect on those qualities (Berns, 2004).

Iaquinta and Hipsky (2006) also found that students grow socioemotionally by identifying with the main character, which then leads to personal insight and growth. Students are able to validate their thoughts and feelings and work together as a group to develop empathy (Berns, 2004). Johnson et al. (2001) also added that along with empathy participants, develop self-confidence which results from thinking in another perspective. This dynamic of a group setting for bibliotherapy has been found to promote interpersonal growth and development, which assists in improving self-esteem, and self-help treatment (Pardeck, 1990).Kozel (1996) found that bibliotherapy also helped in modifying attitudes, promoting behavior changes, and fostering self development amongst all its participants (p. 3).

Prater et al. list the third benefit as education, stating that "bibliotherapy is a tool" that provides useful information to help students solve their problems (2006, p. 6). Johnson et al. (2001) found that sessions helped strengthen conflict resolution among students. Iaquinta and Hipsky (2006) also discussed the coping strategies that were developed because teachers in their study were able to address the issue of teasing and bullying through children's literature. If a teacher was able to facilitate a rich and engaging discussion on the reading's important topics, children were seen to be able to identify with these topics (Sullivan & Strang, 2002).

Students then learned, from the character's example, how to cope and/or resolve their own inner conflicts (Sullivan & Strang, 2002). Along with coping strategies comes the important skill of problem solving for the young readers Prater et al. (2006),Iaquinta and Hipsky (2006),and Kozel (1996) all agreed that bibliotherapy had a positive effect on problem solving skills. Prater et al. (2006) believes that bibliocounselling can be used to provide information or insight about problems, and thereby helping to lead the student to possible solutions for their problems.

Problem solving skills also improved for students with disabilities. They benefit from learning to solve social problems similar to those discussed in the therapeutic children's

literature book read to them in class (Iaquinta & Hipsky, 2006). The fourth benefit of bibliotherapy identified by Prater et al. (2006) is that it helps students reduce their anxiety and promote relaxation as they discover that others have the same feelings, and have gone through similar life events. Facilitated sessions were found to lessen a student's feelings of isolation and increase a sense of companionship amongst classmates (Berns, 2004). Johnson et al. "documented less physical violence in the classroom, less name-calling and fewer put-downs among students" who had participated in bibliotherapy lessons (2001,p.176). With the proper material, bibliotherapy sessions create the important topic of awareness, when students realize that other people have similar problems to themselves, they are able to feel a bit more comfortable in their skin and in their environment (Prater et al., 2006).

Both Kozel (1996) and Inman et al. (2000) discuss the fact that students sometimes feel alone but the reading or sharing of a story depicting children with similar fears or anxieties is able to help provide reassurance that the student is not alone, and many people have similar hopes, dreams, and problems. Bibliotherapy can reduce negative behaviors in a classroom because of its stress reduction properties.

Finally Prater et al. (2006) states that bibliotherapy is also another way to provide a novel to a student. They also found that "bibliotherapy exposes students who might be underachieving to books and to reading, another major benefit of the practice" (Prater et al., 2006, p. 6). When students find a novel that is right for them, and they take the time to read, and literacy skills develop. Johnson et al. (2001) also discovered an increase in language enrichment as a side benefit to bibliotherapy. Not only does it improve reading readiness, and academic achievement according to Iaquinta and Hipsky (2006), Kozel (1996), and Prater et al. (2006) noted that bibliotherapy is an important tool to teach "appropriate social and developmental skills such as friendship skills, hard work, and kindness" to today's youth (Prater et al., 2006, p. 6).

Berns cautions facilitators to remember that "the beneficial effects of bibliotherapy may not be seen for some time" (2004, p. 327). Just as most lessons in the classroom, you must trust the process and have the confidence that bibliotherapy will lighten a listener's sorrow (Berns, 2004). Over time, according to Prater et al. (2006), bibliotherapy allows participants to identify an issue, develop empathy for those who are affected, learn coping mechanisms they can apply to their own life, reduce anxiety and improve literacy skills.

Self-Esteem

One of the basic needs for all children is to have a healthy self-esteem. When children have a healthy self-esteem, they are better equipped to learn. Maslow points out that all people need to have a high opinion of themselves to be able to obtain anything. Students who are confident with themselves will face the challenges of school better and become more confident in situations they encounter (Prince and Howard, 2002).

Teachers can create an environment that can boost students' self-esteem (Laursen, 2005). This environment can be created through how the teacher interacts with the students and how the students interact between each other. Teacher and student, both, need to realize the benefit to positive encouragement and acceptance. Students who are do not feel accepted within the classroom and society may then turn to gangs. Gangs provide the needed acceptance which students need, whatever the price (Prince and Howard, 2002; Laursen, 2005).

Bibliotherapy is a tool that can be used to increase self-esteem and other issues that students might face within the classroom setting. Using bibliotheraputic books is a great way of helping students understand the feelings they are having, find solutions that will work, and

make them feel better about themselves. As students feel better about themselves, they will increase their personal success.

So, the purpose of the present study was to explore the effect of bibliotherapy intervention program on self esteem of gifted first year primary school children .

Methods

The participant

60 first year primary students participated in the present study. Participants met the criteria for giftedness by using Scales for Rating the Behavioral Characteristics of gifted preschool children (Mourad, in this Volume) .Children were randomly classified into two groups: experimental (n= 30 , 23 boys , 7 girls) and control (n= 30 , 21 boys and 9 girls).

The two groups were matched on age, IQ, and Self Esteem . Table 1.shows means, standard deviations ,t- value, and significance level for experimental and control groups on age (by month) ,IQ , and self esteem (pre-test).

Table 1. *means, standard deviations , t- value , and significance level for experimental and control groups on age (by month),IQ, and Self Esteem (pre-test).*

Variable	**Group**	**N**	**M**	**SD**	**T**	**Sig.**
Age	Experimental	34	72.24	1.96	-.121	Not sig.
	Control	33	73 .41	2.01		
IQ	Experimental	34	122.34	4.45	-.221	Not sig.
	Control	33	124.89	4.24		
Self	Experimental	34	17.21	3.00	-.587	Not sig.
Esteem	Control	33	17.67	3.52		

Table 1. shows that all t- values did not reach significance level. This indicated that the two groups did not differ in age , IQ , and Self Esteem (pre-test).

Instruments

Self Esteem Scale: Self-esteem was assessed with the Rosenberg Self-esteem Scale (1965). A sample item is “I am able to do things as well as most other people.” Each of the 10 items is given a score from 1 to 4 and higher scores indicate more positive self-esteem. The alpha reliability for the sample was .90.

Training Procedure

A story was read to the children in the experimental group for eight sessions of the treatment procedure. The group sessions were held on Thursdays, once a week, in a classroom. Each session lasted approximately 40 minutes. Ten days after the last session of the treatment procedure, post-test measure was applied to treatment group subjects. Twelve days after the last session, posttest was given to no-treatment control group subjects.

The researcher did read each part of the story aloud at each session and students followed it from their own copies. Then, the students were asked to summarize the story. Next, structured post reading discussion in which students asked some questions regarding the topic was conducted. The post reading discussion questions were as follows: Who were the characters of the story? Who was the main character faced with the problem? What feelings and thoughts did the character have about his/her problem? How did he/she overcome the problem? Have you ever faced with the similar problem? What did you feel? What did you think? How did you deal with the problem? If not, what would you do if you face with? What

other solutions would you use? Post reading discussion enabled children to identify challenges in feelings, relationships, and behaviors of the character/s.

When children asked to compare his/her experiences with the experiences of the character, the children may explore his/her own behaviors and feelings and the consequences of them. Thus, the children make a conclusion or generalization about the topic through the discussion. Lastly, a follow-up activity that was aimed to reinforce the skills used by the characters was administered to subjects. Activities allow students to identify the problem presented in the story, produce alternative solutions to the problem, and evaluate the results of the chosen solution.

Design and Analysis

The effects of implementing bibliotherapy program on students' self esteem were assessed using a repeated-measures design, pre- post- and follow –up testing.

Results

Table 2. shows data on ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in self esteem . The table shows that the (F) value was (132.872) and it was significant value at the level (0.01).

Table 2. *ANCOVA analysis for the differences in post- test mean scores between experimental and control groups in self esteem*

Source	**Type 111 Sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Pre	907	1	907		
Group	2029,969	1	2029.969	132.872	0.01
Error	977.771	64	15.278		
Total	3013.194	66			

Table 3. shows T. test results for the differences in post- test mean scores between experimental and control groups in self esteem .The table shows that (t) vale was (14.462). This value is significant at the level (0.01) in the favor of experimental group. The table also shows that there are differences in post- test mean scores between experimental and control groups in self esteem in the favor of experimental group.

Table 3. *T. test results for the differences in post- test mean scores between experimental and control groups in self esteem*

Group	N	Mean	Std. deviation	T	Sig.
Experimental	34	33.45	3.40	14.462	0.01
Control	33	17.63	2.94		

Table 4. shows data on repeated measures analysis for self esteem . The table shows that there are statistical differences between measures (pre- post- follow -up) at the level (0.01).

Table 4. *Repeated measures analysis for self esteem*

Source	**Type 111 sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Between groups	6323.974	1	6323.974	240. 362	0.01
Error 1	1710.165	65	26.310		
Between Measures	3743.818	2	1871.909	319.483	0.01
Measures x Groups	3827.121	2	1913.561	326.591	0.01
Error 2	761.695	130	5.859		

Table 5. shows data on Scheffe test for multi-comparisons in self esteem. The table shows that there are statistical differences between pre and post measures in favor of post test, and between pre and follow –up measures in favor of follow – up test, but no statistical differences between post and follow –up test.

Table 5. Scheffe test for multi-comparisons in self esteem

Measure	**Pre** **M= 17.01**	**Post** **M= 33.45**	**Sequential** **M= 32.35**
Pre	--	--	--
Post	18.95*	--	--
Sequential	17.85*	1. 10	--

Discussion

The main objective of the present study was to explore whether there were differences in post – test scores mean between control and experimental groups on self esteem . The study also examined If the program was effective, if this effect was still evident a month later .

The results of this study as revealed in tables 3 and 5 show that the bibliotherapy intervention program was effective in improving self esteem of students in experimental group, compared to the control group , who did not receive such an intervention .

It could be concluded that "Bibliotherapy Intervention Program" was found to be effective on promoting self-esteem of students for several reasons. Firstly, the continuous story covered the topics that were determined according to esteem-needs of students in the primary school in which the study was conducted. Additionally, in each chapter of the story, a topic regarding self-esteem enhancement was handled by three characters of the story.

First, the characters faced with the problem situation that troubled them and then they overcame this stressful problem by using some methods based on cognitive behavioral approach. After reading of the story, students discussed some questions about the problem, as well as their own experiences which aimed to help them (a) to see that they are not alone in their problems; (b) others face with similar problems, (c) there are solutions for problems and (d) so that they can have a sense of relief. In addition, students conducted a follow-up activity that was included in the story which that enabled them to practice their learning. Furthermore, while researcher reading the story, the students listened and followed it from their own copy. This made easier to follow the story for the participants. Thus, the application of bibliotherapy that involved issues corresponds to the needs of students and based on cognitive behavioral approach, might be listed among the factors that increased the power of treatment.

In addition , the findings of this study goes in the same line with most of studies that adopted the bibliotherapy intervention program which reported increasing self esteem (Meier-Jensen ,2001; Reynolds and Simpson ,2003; Spear,1996; Wadsworth, 2007) .

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Parenting Styles, Self esteem and Depression among 14-17 years old Adolescents in Egypt

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Abstract

The purpose of this study was to explore variations in adolescent self esteem and depression as a function of parenting styles. Participants were 300 students, aged from 15-17 years , from prep and secondary schools located in Al Arish Governorate, Egypt . Participants completed measures of parenting styles , self esteem , and depression. Authoritative mothering was found to relate to higher self-esteem and to lower depression. Paternal parenting styles was also related to psychological adjustment, however, although the advantage of authoritative mothering over permissive mothering was evident for all outcomes assessed, for paternal styles the advantage was less defined and only evident for depression.

Keywords Parenting styles, self-esteem, depression, adolescence.

Introduction

Parenting style has been a major topic of study for the later part of the Twentieth Century. Researchers have investigated the dimensions of parenting (Ang, 2005; Aunola & Nurmi, 2005; Barver, Olsen & Shangle, 1994; Baumrind, 1971), identifying warmth/ acceptance/ responsiveness, control/demandingness and autonomy granting as the three important dimensions of parenting in Western societies. It is important to understand the notions of parenting styles in the Western countries and the application of these parenting notions in Asian countries.

An important framework for studying parenting style was developed by Baumrind (1967). She did not measure specific parenting behaviors for specific situations. Instead, parenting styles are the combination of parental attitudes, practices and nonverbal expressions that characterize the nature of parent-child interactions across diverse situations. (Glasgrow, Dombusch, Troyer, Steinberg, & Ritter, 1997). Baumrind (1967) proposed that parents fall into one of four categories: authoritative, authoritarian, permissive and neglectful. These styles of parenting are based on levels of demandingness and responsiveness used by the parents in disciplining the child. Parental responsiveness refers to the amount of acceptance that a parent displays toward a child, and parental demandingness refers to how restrictive and demanding parents are (Baumrind, 1991). Baumrind (1991) found that Authoritarian parents displayed high levels of demandingness and low levels of affection to their children. Permissive parents expressed affection to their children, but showed low levels of behavioral control. Authoritative parents displayed both demands and affection to their children.

Parenting Styles Among Arabs

In contrast with reports on the effect of authoritarian parenting in the West, some studies indicate that Arab children and youth are satisfied with this style (Hatab & Makki, 1978) and do not complain of the abusive-aggressive behavior of teachers (Dwairy, 1998, pp. 43-61). Among Egyptian college students, 64.4% of women and 33.1% of men favored "absolute submission" to parents. As for differentiation from parents, 57.7% of female and 25.7% of male students favored children having the same character and morals as their parents (Al-Khawaja, 1999). In a study conducted among Saudi female college students, 67.5% of the sample reported that they were physically punished at various stages in their life. When their attitudes toward physical punishment were studied, it was found that 65.1% of the students justified it (Achoui, 2003).

If these are the attitudes of college students, one can expect that similar or more pronounced results may be obtained in the general Saudi populace, although Saudi society is considered among the conservative societies as compared to other Arab or Muslim societies.

Generally speaking, female Arabs identify more than males with the traditional norms (Al-Khawaja, 1999), even when they are the victims of some of the norms, which is exemplified by the justification by females of female circumcision (Al-Kaa'ki, 2000). Some other studies indicated that authoritarianism is not associated with any detriment to the mental health of Arab youth (Dwairy, 2004a; Dwairy & Menshar, 2006). It seems that authoritarian socialization has a meaning and effect different from that known in the West when it is applied within an authoritarian culture such as the Arab or Muslim. Within this culture, children consider application of the authoritarian style of punishment as the normal duty of parents and teachers (Dwairy, 1997).

Despite that the Arab society treats women more strictly than men (Zakareya, 1999), Achoui (2003) found that male children undergo more physical punishment than female children in Saudi Arabia. Studies on Arab-Palestinian adolescents in Israel indicated that boys perceive their parents' style to be more authoritarian than girls do (Dwairy, 2004a, 2004b). Palestinian boys in the Gaza Strip also perceived both their parents as treating them more negatively than the girls did; they perceived their parents as being more strict in disciplining, more rejecting, and hostile than did the girls (Punamaki, Qouta, & El Sarraj, 1997).

Similar results were reported in Algeria (Fershani, 1998; Zegheena, 1994). A research study conducted in Egypt indicated an interesting interaction between sex and urbanization. Rural male adolescents reported a higher level of authoritarianism on the part of their parents than females, whereas urban females reported a higher level of authoritarian parenting than males (Dwairy & Menshar, 2006). Parents treat first-born children in a special way. Axelson (1999) claimed that first-born children "tend to receive more attention, are likely to carry the family's ambitions, and are assigned a dominant role with respect to later children" (p. 285). This description fits the Arab first-born children, too, who carry the parents' aspirations, on one hand, and enjoy more parental attention, care, and indulgence, on the other. Some research indicates that a first-born Arab child is treated more gently than the other children in the family (Achoui, 2003; Al-Teer, 1997).

These differences between first-born and other children are expected to influence the process of individuation and the parent-child connectedness. Some reports indicated that parental education, economic level, and urbanization influence the parenting styles and practices. This association between socioeconomic classes and a harsh style of parenting is universal, and not specific to Arabs. More educated mothers were less authoritarian and controlling than less educated parents in Saudi Arabia (Al-Mutalq, 1981), Egypt (Hana, 1974), and Algeria (Sahrawi, 1998). Mahmoud (1997) reported that mothers of a higher socioeconomic level tend to be more authoritative and encouraging of their children's independence than lower socioeconomic-level mothers.

Method

Sample

Participants in the current study included 300 students (155 males and 145 females), aged from 15-17 years , from prep and secondary schools located in Al Arish Governorate, Egypt .

Procedures

Letters were sent to the parents of the students in the target classes informing them of the nature of the study. Parents were asked to complete the questionnaires independently and without providing identifying information, then to send their completed surveys together in a single envelope.

Measures

Parenting Style

Each parent independently completed the Parent Authority Questionnaire. According to Ang (2006), the 30-item PAQ was developed to measure adolescent perceptions of Baumrind's (1971) parental authority and was validated on a sample of college students. In the current study, the PAQ was modified to address parental self-report of parenting style, substituting "my mother" with "I" for all items. Mother and father forms were identical. The revised PAQ consisted of 10 items measuring authoritarian parenting style, 10 items measuring authoritative parenting styles, and 10 items measuring permissive parenting style. An example of an authoritarian item is "When I ask my children to do something, I want them to do it immediately without asking any questions." An authoritative item is "When my family chooses to do something, I will discuss the reasons for the choice with the children." A permissive item is "I feel that children can do whatever they like." Responses to each of these items were rating on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Both mothers and fathers were requested to complete this survey separately.

Internal consistency of the resulting subscales was evaluated with Cronbach's alpha. For each subscale of the PAQ, a scale score was obtained by taking a mean of the relevant items. A higher score indicated a higher level of that particular parenting style. Among the Authoritarian scale items, items 2, 3, 12, 16 and 18 did not contribute to internal consistency of the scale. These items were therefore dropped, and the authoritarian composite included the remaining 5 items. Cronbach alpha coefficients revealed good internal consistency in the subscales (Authoritarian, $\alpha = .686$; Authoritative, $\alpha = .680$; Permissive, $\alpha = .663$).

Self-esteem

Self-esteem was assessed with the Rosenberg Self-esteem Scale (1965). A sample item is "I am able to do things as well as most other people." Each of the 10 items is given a score from 1 to 5 and higher scores indicate more positive self-esteem. The alpha reliability for the sample was .90.

Depression

Depression was assessed with the Center for Epidemiologic Studies Short Depression Scale (Andresen, Malmgren, Carter, & Patrick, 1994; Radloff, 1977). In this scale participants are given a list of feelings and behaviors and are asked to indicate how often they have felt this way during the past week. Sample items include "I was bothered by things that usually don't bother me," and "I felt that everything I did was an effort." Responses to each of the depression items were scored on a 1 to 4 scale, 1 being "rarely or none of the time" and 4 being "all of the time," with higher scores indicating higher levels of depression. The alpha reliability for the sample was .80.

Results

To examine the differences between mothers' and fathers' parenting style, paired t-tests for each parenting scale were conducted. Results of these tests were not significant.

There were no significant differences between mothers and fathers on the four parenting scales scores.

Table 1. *Means and Standard Deviation for Parenting Scale Scores*

	Mother		Father			
Variables	**M**	**SD**	**M**	**SD**	**r**	**Paired t**
Authoritarian	2.88	0.58	2.89	0.19	0.31	-0.71,No sig
Authoritative	*3.93*	*0.37*	3.91	0.54	0.53	0.21,No sig
Permissive	2.98	0.69	2.65	0.49	0.51	-0.46,No sig
Neglectful	2.64	0.53	2.48	0.52	0.50	-0.43,No sig

Maternal parenting style

Post hoc comparisons for maternal style yielded significant differences between the authoritative style and the remaining three styles, with the authoritative style scoring higher on self-esteem and lower on depression than the remaining three styles. Additionally, the post hoc comparison yielded a significant difference between the permissive style and the authoritarian and neglectful style, with the permissive style scoring higher on self-esteem than the authoritarian and neglectful style (Table 2).

Table 2 *Self-esteem, and depression for maternal parenting style categories*

	Outcomes			
	Self esteem		Depression	
Maternal Parenting Styles	**M**	**SD**	**M**	**SD**
Authoritative	4.18	0.58	1.40	0.43
Permissive	3.72	0.77	1.34	0.39
Authoritarian	3.45	0.65	1.29	0.35
Neglectful	3.87	0.39	1.33	0.72

Paternal parenting style

Post hoc comparisons for paternal style yielded significant differences between the authoritative style and the authoritarian and neglectful styles, with the authoritative style scoring higher on self-esteem and life-satisfaction than the authoritarian and neglectful styles. Additionally, the post hoc comparison yielded a significant difference between the authoritative style and the permissive and neglectful styles, with the authoritative style scoring lower on depression than the permissive and neglectful styles (Table 3).

Table 3 *Self-esteem, and depression for paternal parenting style categories*

	Outcomes			
	Self esteem		Depression	
Paternal Parenting Styles	**M**	**SD**	**M**	**SD**
Authoritative	4.28	0.68	1.20	0.53
Permissive	3.62	0.67	1.44	0.49
Authoritarian	3.35	0.65	1.39	0.35
Neglectful	3.27	0.35	1.23	0.52

Discussion

The goal of this study was to compare mothers' and fathers' parenting styles within the Egyptian population from prep and secondary schools located in Al Arish Governorate, Egypt . In addition, this study examined associations between both mothers' and fathers'

parenting styles and self esteem and depression adolescents between the ages of 14 and 17 years.

Overall the results indicate that parenting styles are related to well-being in adolescents. Authoritative parenting was found to relate to higher self-esteem and life-satisfaction and to lower depression. These findings are consistent with previous work on children suggesting a link between parenting practices and adjustment (Karavasilis et al., 2003; Kauffman et al., 2000; Maccoby & Martin, 1983).

However, of particular note is that although the advantage of authoritative mothering over permissive mothering is evident for all outcomes assessed, for paternal styles the advantage is less defined and is only evident for depression. These findings seem to indicate that permissive fathering may not be as detrimental to the child as permissive mothering. The importance of fathers in the lives of children has received recent attention in empirical studies (Lamb, 1986). Nevertheless, although fathers are beginning to play a large role in the lives of children, fathers seem to serve a different function in parenting than do mothers (Lamb, 1986), which may account for the differences found in the current study. It is possible that since fathers play a more playful role in the lives of children, having a permissive father may complement the fatherhood role and hence may not interfere with the child's well-being as much as having a permissive mother. As parenting studies assessing theses relationships seldom included separate analyses for mothers and fathers, conclusions regarding these dynamics are necessarily speculative. These differences highlight the importance of examining the consequences of parenting practices separately for mothers and fathers.

Limitations of the Study

The current study has some limitations that need to be taken into consideration, including concerns regarding the characteristics of the sample. The majority of the parents' responses on questionnaires was quite similar and comprised a lack of variability. The lack of variance within the sample makes finding significant differences less likely. A larger and more economically diverse Chinese sample may reveal differences attributable to parenting style.

The measures used in this study were self-report, which is similar to other studies of the nature of using self-report measures (Chao, 1994; Wu et al., 2002). This study was limited by the sole use of the Parental Authority Questionnaire (Ang, 2006; Buri, 1991) and self-report data gathered from parents on how they interact with their children. As in any study relying upon the accuracy of parents' perception of relationship within the family, bias may have influenced the outcome. Future research might supplement parent report with adolescents' report. It would be interesting to compare parents' responses on parenting style measures. Researchers could also incorporate multiple methods, such as, observations and interviews in assessing parenting style. According to Wu et al. (2002), mean differences in self-rating could be due to response sets reflecting different cultural norms. For example, Confucian society encourages the avoidance of extremes (Wu et al., 2002).

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Design Methods of Network Cabling With Concentrators

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Abstract
In connection with mass distribution of grid computing systems a problem of efficient usage of them became very urgent. One of these problems is constructing network topology. Construction must be done in a way that reduces the expense of materials required. This problem has been handling in many papers. A construction of hierarchical networks with concentrators which perform a multiplexing of different subscribers with a bulk of them is being under consideration in this article. Here we deal with concentrators' method (addition and deletion algorithms) and hierarchical method. We demonstrate a new automated tool for designing network topology.

Keywords: network topology, network construction, hierarchical method, concentrators' method.

Introduction

A problem of communication networks topological design with an aim of reducing total cost of the network has been handling in many papers. At the beginning of 60`s of the past century A.Prim suggested a method of designing a network of a minimum value with a unified switching center by parallel coupling to this center of the nearest stations according to their distance [5]. Then there was a method by Ezhi-Williams issued from the connection to the switching center the most distant stations [1, 2, 4, 6].

A problem of communication networks design with a multiplexing of subscriber loops on separate concentrators for comparatively small sections of local networks has been considered in works mentioned above and also in [6].

Nowadays, a quantity of the subscribers per unit area and a quantity of the concentrators constructed within the assigned district or micro-district has dramatically increased. At the same time a lot of tracing restrictions arose both for subscribers` and multiplexed channels in view of the fact of tightening the apartment block and appearance of new enterprises and organization etc. A development of automated system of constructing regional sections of communication networks with concentrators, that'll take into consideration different cost and restrictions factors, became essential.

Ways of constructing networks with concentrators

There are two methods of constructing such networks:

1. Concentrators` method
2. Hierarchical method

1. Concentrators` method

There is a switch center (SC) and a set of subscribers. The subscribers can connect to the SC but not to each other. A connection is implemented with a cable of a certain cost. It is obvious that the most optimum alternative is to connect each subscriber to the nearest SC. But we have an opportunity to place concentrators in some spots of the network. These devices merge the traffic from several subscribers. The cost of installation of the concentrator includes the cost of the concentrator itself and the cost of the cable for connecting to the closest SC. We can convert the cost of the cable into the equivalent in value length of the cable. This is what we are going to do. According to the task, we can buy either a concentrator or some amount of cable for a certain sum of money. Mind that all the possible spots for installing the concentrator are already specified.

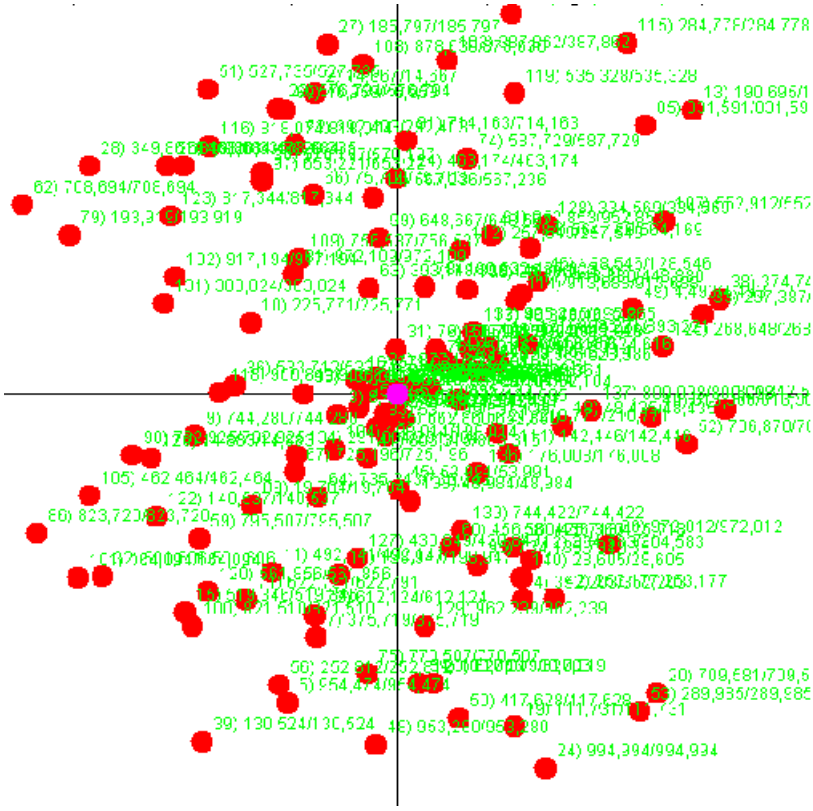
Exact solution requires a bulk of calculations. A heuristic approaches give a solution only close to the optimum [3, 4] which is not enough.

The first variant is addition method. The essence of it is rather simple. At first we connect all the subscribers to the nearest SC; concentrators are not installed. The algorithm is iterative. On every iteration we alternately try to install each quiescent concentrator and to connect those subscribers re-connection of which will reduce total cost of the cable. Then we chose the concentrator which gives minimum cost of the network (including the cost of the concentrator). If the introduction of this concentrator reduces the cost of the network, then this configuration is taken as a new one and we move on to the next iteration. If not, a calculation is considered as complete and the topology derived in previous step as close to the optimum.

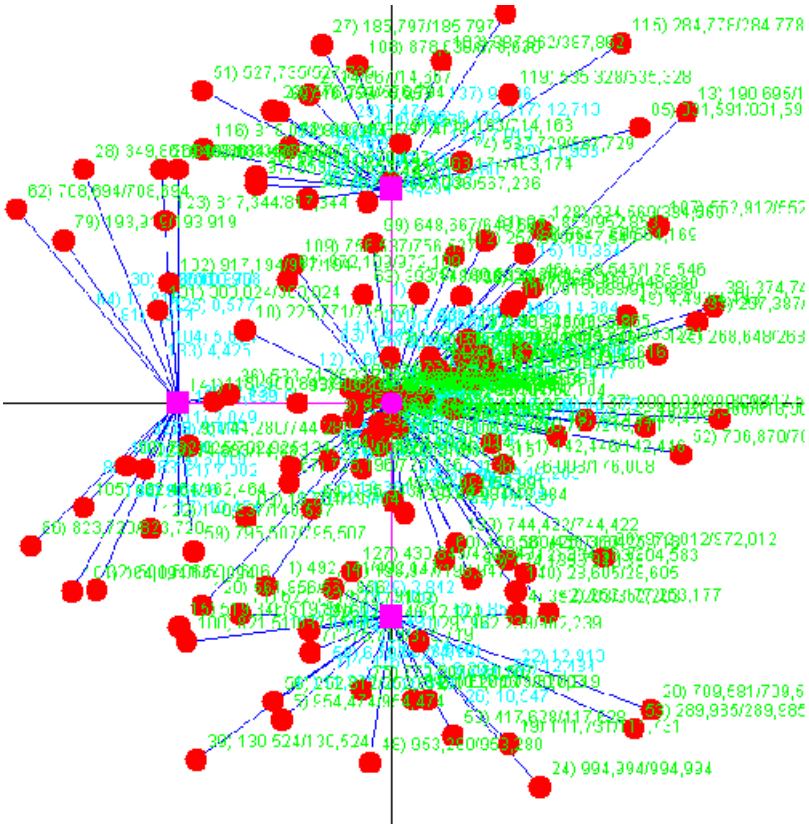
The second variant is deletion method. At first we install all the concentrators and connect the subscriber to the nearest point (either SC or the concentrator). The algorithm is iterative as well. On every iteration we try to remove each of the concentrators remained and to connect its` subscribers to the closest points. Among all configurations derived we chose the one of the minimum cost. If this cost is lower than in the previous step we take the topology as a current and move on to the next iteration. If not, a calculation is considered as complete and the topology derived in previous step as close to the optimum.

Let`s look at the example. As an example we take a network where spots are scattered within a circle. Radius and the azimuth angle are distributed evenly. Thereby, closer to the center spots are situated more tightly. SC is in the center of the circle. Estimated places for concentrators are situated in semi-radius distance from the center, azimuth angles differ in 90 degrees. Let`s scatter 140 spots in a circle with radius of 20 units (pic.1) and connect them in two ways permitting to connect up to 20 subscribers. We suppose that the communicator is an equivalent of 120 units of the cable. Let`s look at the results of addition method (pic.2) and deletion method (pic.3). The first network costs 1258.82 (898.823 for cable, 360 – three concentrators), the second one costs 1339.15 (1099.15 for cable, 240 – two concentrators).

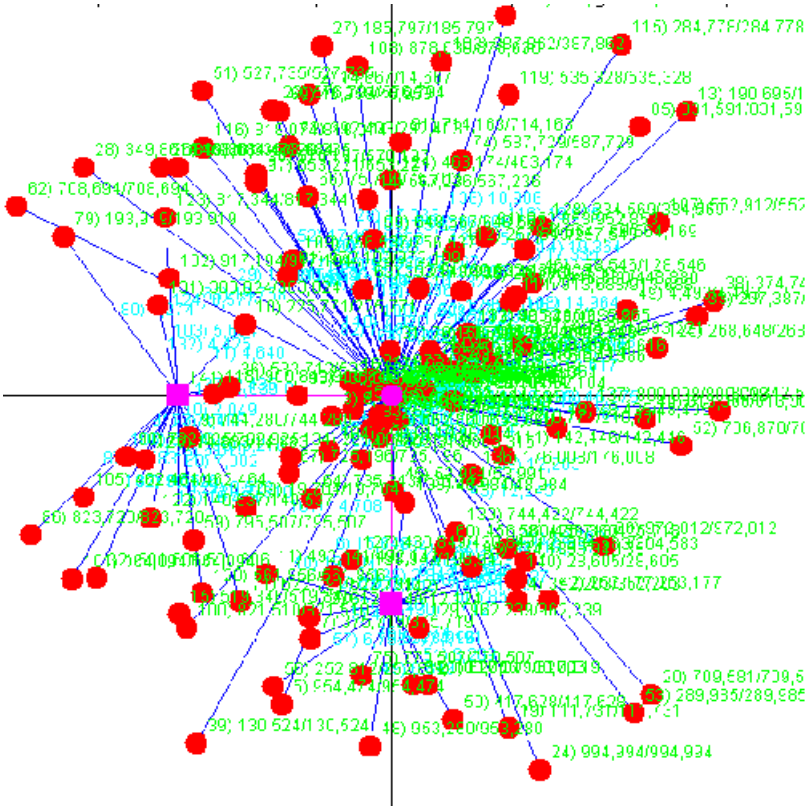
It is rather complicated to get a real time of completing the algorithm because all the calculations are done very quickly and a random component is commensurable with the time of the calculations. We have to increase a number of the spots to 10000. It is impossible to understand anything on the picture, that`s why we are not citing it here. Let`s tabulate all the data (Table 1). Hence it follows that deletion method gives worse results and takes more time.



Picture 1 – Spots without connection.



Picture 2 – Addition method.



Picture 3 – Deletion method.

Table 1. *Comparison of the algorithms with a quantity of spots (10000 spots).*

Algorithm	**Networks cost**	**Cable cost**	**Number of concentrators**	**Concentrators cost**	**Time for calculations, msec**
Addition	99643.8	99163.8	4	480	47
Deletion	99699.7	99219.7	4	480	4197

2. Hierarchical method

As communication networks providing a transmission of various information (phone, computer network data, facsimile, and multimedia) develop rapidly, an urgent necessity of building hierarchical systems appears. In these systems there is information, transmitted by shared channels from the local subscribers and concentrators, then it is compressed in concentrators of a higher rank and etc. till the commutation center of the highest rank.

The introduced variant of building a hierarchical network is based on the following principles [6]:

1. We connect n_i abonent stations to each of m local concentrators. Then we sort the assigned group of subscribers by distance from the subscriber to the concentrator of this group.
2. A computed sequence of certain distances from the subscriber to the concentrator is a sum of distances from any subscriber to the concentrator with a glance of distances closer to the concentrator. We create a chain of connections from subscribers to the concentrator. For instance, for subscribers 3-5, 7-5, 8-6, where the first figure is

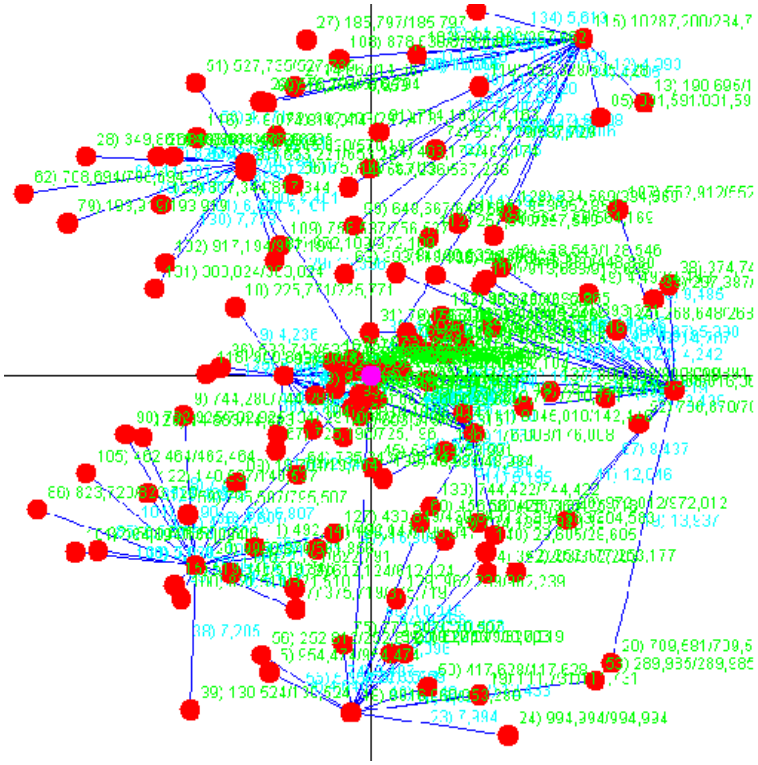
subscriber`s number, and the second one is the distance to the concentrator we create a chain: 5(3), 10(3, 7), 16(3, 7, 8).

3. By this chain we define the closest to the corresponding concentrator subscribers groups $n_{зад}$, where $n_{зад}$ is an assigned permissible number of subscribers connected to the concentrator.
4. We sort out a group of the lowest cost then unite the subscribers of this group into a separate sub network. Determine the next sub network, etc.

The algorithm is iterative. After coalescing nodes into groups the centers of these groups became new nods, which by-turn will be also grouped. Continue till all the nods are coalesced.

Now we take the same example (pic.1). A workload of each subscriber we define as a random evenly distributed figure from 0 to 1000. We get a following topology (pic.4). The cost of the connection is 942.24.

This calculation takes <50 msec. Then we compare the execution time and the number of subscribers for processing (table 2). One can notice that hierarchical method has a cubic complexity (chain calculation has a cubic complexity and is done certain amount of times. This amount is approximately proportional to the amount of the subscribers).



Picture 4 – A hierarchy.

From picture 4 we see that distance from separate concentrators to the common switch center (SC is defined on the latest iteration of the algorithm) may be greater than the distance from separate stations to the SC. It can be explained by the fact that in the beginning of constructing the network a position of the SC is still undefined. We can avoid such situations by a minor adjustment of the algorithm if we know at least an approximate position of the SC.

Table 2. *Time calculation and cost dependence on spots number.*

Number of spots	Cost	Time calculation, sec
500	1698.26	0.39
1000	2656.07	2.948
1500	3324.59	10.389
2000	3979.46	24.211
10000	8738.66	5010.56

You should mention that in case with 10000 spots the time exceeds the cubic time: it should be about 3200 sec. It happens because of lack of main memory and evinced in frequent swapping.

Conclusion

Thereby, there are heuristic algorithms for designing networks with active and passive concentrators. As a result we`ve got a tool for building up hierarchical networks which can be used for multiplexing in concentrators.

We can combine both methods: at first coalesce nods with one method and then connect the centers with the other. These algorithms can be applied to various types of the concentrators, which multiplex not only by unifying the subscribers` channels into main one, but also by frequency division and time-division multiplexing, replacement of the wire cable by optical fiber cables.

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The Raven's Colored Progressive Matrices Test: A normative Data for Gifted Students in Egypt Aged 10-17

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Abstract
Raven's Coloured Progressive Matrices test has been extensively used across a wide variety of settings in different countries all over the world as a fair culture measure of non-verbal intelligence. The objective of the present study is to extract norms of the test to identify gifted children in Egypt. The total number of the sample was 1200 students from Public schools in Baltim Edara . (100 students from grade four , primary , 100 from grade five, 100 from grade six, 200 students from grade one, preparatory , 200 from grade two , 150 from grade three, 150 students from grade one , secondary, 100 students from grade two, 100 from grade three). Number of females and males was equal. The principal findings of this study indicated that there were a significant effect of age on test scores was evidenced, where scores increased with age as expected. The findings also indicated there were no significant difference between the genders with regard to performance on the Raven's CPM. Results of this study indicated that Raven's CPM was an effective means of selecting children who may be gifted. The higher level thinking skills demonstrated on this assessment suggest that these students may benefit from increased support and placement in gifted programs.

Key words ; Raven's Coloured Progressive Matrices test, normative Data, Gifted students

Introduction

Research investigating the effectiveness of nonverbal abilities tests has become increasingly popular with the growing recognition of the need for reduced-biased testing. Numerous studies have been conducted on the usefulness of these devices in selecting for students who are gifted (e.g., Karnes & McGinnis, 1994; Karnes & Whorton, 1988; Lewis, 1999; Mills, Ablard, & Brody, 1993; Mills & Tissot, 1995; Naglieri, & Ford, 2003; Shaunessy, Karnes, & Cobb, 2004; Stephens et al., 1999).

One form of nonverbal assessment that has been suggested by many researchers as an alternate or supplementary measure in identifying gifted students from culturally diverse backgrounds is the Raven's Standard Progressive Matrices (Karnes & Whorton, 1988; Mills & Tissot, 1995; Richert, 1987; Shaunessy et al., 2004; Stephens et al., 1999). The Raven's is generally regarded as a nonverbal measure of fluid intelligence (Mills & Tissot, 1995).

The Raven's Progressive Matrices (RPM) test1 is a standardized intelligence test that consists of visually presented, geometric-analogy-like problems in which a matrix of geometric figures is presented with one entry missing, and the correct missing entry must be selected from a set of answer choices. It is internationally recognized as a culture-fair or culture reduced test of non-verbal intelligence for young children (Raven et al., 1990). This easily administered, multiple-choice pencil and paper test has no time limit, and comprises three sets of twelve matrix designs arranged to "assess mental development up to a stage when a person is sufficiently able to reason by analogy to adopt this way of thinking as a consistent method of inference" (Raven et al., 1993, p. CPM2).

In this version of the Raven's Progressive Matrices however, each item is printed with a brightly coloured background, making the test more appealing for children.

The testee is shown a series of patterns with parts missing. The parts removed are of simple shape and have been placed below the matrix, among other similarly shaped pieces (although the figures on those pieces do not compete the pattern) (Martin & Wiechers, 1954). The problems are easy to begin with, but grow more difficult as the test proceeds "because the figures in the patterns to be completed remain simple but the relations between the figures

become increasing complex" (Martin and Wiechers, 1954, p.143). The testee can either point to the pattern piece s/he has selected or write its corresponding number on the record form (Lezak, 1995). The total score is the total number of matrices completed correctly, and the test is thus scored out of 36.

The test developers claim the test measures higher-level thought processes, including the ability to reason by analogy and the ability to become more efficient by learning from immediate experience (Raven et al., 1998). With the Raven's it is possible to learn from the easier items in order to improve performance on the more difficult items, yielding an index of intellectual efficiency that has many implications for identifying culturally diverse students who may be gifted (Mills & Tissot, 1995; Raven et al.,1998).

Although the test is supposed to measure only eductive ability, or the ability to extract and understand information from a complex situation (Raven, Raven, & Court 1998), the RPM's high level of correlation with other multidomain intelligence tests have given it a position of centrality in the space of psychometric measures (Snow, Kyllonen, & Marshalek 1984), and it is therefore often used as a test of general intelligence. Using the RPM as a measure of general intelligence, though it consists only of problems in a single, nonverbal format, stands in contrast to using broader tests like the Wechsler scales, which are comprised of subtests across several different verbal and nonverbal domains.

Mills and Tissot (1995) found the Raven's identified a significantly greater percentage of ethnically diverse students who were gifted, many of whom were low achieving students, than the School and College Ability Test, a more traditional measure of academic aptitude. Stephens et al. (1999) found that when compared with the Naglieri Nonverbal Abilities Test and the Culture-Fair Intelligence Test (CFIT, Cattell & Cattell, 1965); both nonverbal assessment devices, the Raven's identified the largest number of ethnically diverse students scoring at the 80th percentile or higher.

Shaunessy et al. (2004) reported similar results while Lewis (1999) found that the Raven's and CFIT revealed similar numbers of culturally different students although each test discovered some students the other did not. The results of these studies indicate that the Raven's Standard Progressive Matrices may be an effective means of screening ethnically diverse gifted students.

Although developed and normed on British and American populations, the Raven's Coloured Progressive Matrices test (CPM) is internationally recognised as a culture fair test of non-verbal intelligence for young children (Raven, Court and Raven, 1990). Neverthless, no norms for the test was established in Egypt , so the primary objective of this study is to establish norms for the Raven's CPM test for gifted students in Egypt .

Methods

Participants

Sample selection was carried out in consultation with Edara staff , and after parents' permissions . Participants were students from 4th grade to in the primary schools to grade twelve (Secondary schools) . The total number of the sample was 1200 students from Public schools in Baaltim Edara . (100 students from grade four , primary , 100 from grade five, 100 from grade six, 200 students from grade one, preparatory , 200 from grade two , 150 from grade three, 150 students from grade one , secondary , 100 students from grade two, 100 from grade three). Number of females and males was equal.

The Instrument

The Raven's CPM test is a non-verbal test of intellectual ability and is regarded as being relatively free of accumulated knowledge. Raven's coloured progressive matrices test consists of 36 matrices divided equally into three sets (A, AB, B). In each matrix, there are six choices (answer alternatives). The matrices in set A depend on the child's ability to complete the missing parts. The matrices in set AB depend on the child's ability to perceive the relationships and relations between the matrices and the six answer alternatives. The matrices in set B depend on the development of the child's ability in abstract thinking. The correct answer is given one score whereas the wrong answer is given zero. Thus, the raw score on the coloured progressive matrices test ranges between zero and 36. The psychometric properties of the test are acceptable in most of the studies (Raven, Court & Raven 1990, 2002).

Procedures and Application of the Test

The test manual was obtained and translated into Arabic Language by the first author. The test application was in groups, where each sample of the students were tested in the Multi Media Room, with the help of a professional teacher in using and maintaining Multi Media. The students were sit in their desks , where they had the response sheets , and each Card of the sets were presented using the Projector . Students responded in their response sheets . The following steps were followed:

1- The participants were assured that the test was not part of the school curriculum, and would in no way affect their existing scholastic achievement test results.

2- The participants were asked whether there are any further questions, and these were addressed by the test administrator.

3- Thereafter, the record form was unveiled and participants were asked to fill in their birth date, gender, grade (where necessary, the test administrator or the class teacher provided assistance with this task).

4- The participants were informed that there was no time limit and were instructed to raise their hands as soon as they had finished, when either the test administrator or the class teacher made a note of the time taken to complete the test.

5- Finally, at the end of each testing session, the record forms were placed in an envelope on which was written: the grade; the class number; the number of pupils present at school on the day of testing; the number of pupils assigned to each class; the class teacher's name and finally, the time the test was started.

This study reported a Cronbach alpha (α) of 0.82 for the internal consistency. Also, this study reported r= 0.73 for the correlation between the scale and Mental Ability Test (Mosa, 1989).

Results

1. *Comparison of Scores across Grades*

The raw scores obtained by the sample on the Raven's CPM are compared across the grades. Although the normative data is ultimately to be presented by age group and in the form of a percentile rank, the mean scores and standard deviations for each of the grades were generated and have been presented in Table 1 . There is a steady increase in the mean CPM scores for each grade.

Table 1. *Means, Standard Deviations, Range and Minimum and Maximum Scores by Grade*

Grade	**No.**	**Mean**	**SD**	**Range**	**Minimum Score**	**Maximum Score**
Primary4	100	20	3.45	9	16	25
Primary5	100	23	4.62	8	18	26
Primary6	100	25	2.71	7	19	28
Prep.1	200	28	3.11	9	20	29
Prep.2	200	30	1.66	11	21	32
Prep.3	150	30	2.19	12	21	33
Secondary1	150	31	0.22	5	28	33
Sec.2	100	32	0.37	6	28	36
Sec.3	100	33	0.17	6	30	36

2. *Comparison of Scores across Gender*

The mean score for the male participants in the sample was 26.99 (SD=9.13), whereas the mean score for the male participants in the sample was 28.932(SD=8.16). A t-test was conducted to check whether the difference in means scores between the genders is significant and the results are presented below in Table 2.

The table shows that t-value (-3.963) , which shows that the difference between the two sexes was not significant .

Table 2. *T-test Results for the Comparison of scores across Gender*

Group	**N**	**Mean**	**Std. deviation**	**T**	**Sig.**
Male	600	26.99	9.13	-3.963	No Sig
Female	600	28.932	8.16		

3. *The Norms*

The smoothed norms for all the half-yearly interval age categories are presented in the form of percentile ranks in table 3.

Table 3. *Unsmoothed (Raw) Normative Data For gifted students in all grades*

Grades	**Percentile Points**						
	95	**90**	**85**	**80**	**75**	**70**	**65**
	Smoothed Norms						
4th primary	-	-	-	-	-	-	25
5th primary	-	-	-	-	-	26	-
6th primary	-	-	-	-	28	-	-
1st prep	-	-	-	29	-	-	-
2nd prep	-	-	32	-	-	-	-
3rd prep	-	33	-	-	-	-	-
1st second	-	33	-	-	-	-	-
2nd second	36	-	-	-	-	-	-
3rd second	36	-	-	-	-	-	-

Discussion

The principal findings of this study indicated that there were a significant effect of age on test scores was evidenced, where scores increased with age as expected. The findings also indicated there were no significant difference between the genders with regard to performance on the Raven's CPM.

Results of this study indicated that Raven's CPM was an effective means of selecting children who may be gifted. The higher level thinking skills demonstrated on this assessment suggest that these students may benefit from increased support and placement in gifted programs.

It is recommended that the Raven's CPM be considered as one of the methods employed by a district to select for children who would benefit from gifted programming.

Conclusion

It has been argued here that the Raven's CPM is a reliable and valid instrument for the assessment of non-verbal intelligence in Egyptian children , especially for identifying gifted ones . It is further argued that the CPM not only functions as a quick, cost-effective and accurate screening instrument, but it is also a valuable component in more in-depth diagnostic test batteries. The results of this study revealed the urgent need for the development of more appropriate local normative data for this test, particularly when it is being administered in gifted children.

It is argued here that process of assessing and placing children within the school curriculum will be significantly improved through the establishment of further more appropriate local normative data for this labour-saving screening instrument.

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