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Effectiveness of an Intervention Program for Increasing Emotional Intelligence and Decreasing Emotional and Behavioural Problems of Fourth Grade Pupils in the Sultanate of Oman

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Abstract: *The study aimed at verifying the effectiveness of and intervention program for increasing the emotional intelligence and reducing the emotional behavioural difficulties of fourth grade pupils at the Governorate of Muscat in the Sultanate of Oman. The participants included 52 pupils divided into two groups: an experimental group of 26 pupils and a control group of 26 pupils. The researcher verified suitability based on psychological variables namely: Emotional Intelligence (EQ) using the Bar-On measure, and cognitive intelligence test using the Raven's consecutive colorful Matrices; and the emotional and behavioural problems using a scale developed by the researcher in a previous study. The Tagharid Intervention Programme (TIP) was developed based on the theory of Bar-On EQ, including activities consisting of 18 training sessions. The duration of each session was ninety (90) minutes, two meetings per week. After verifying the validity of the intervention programme by specialists, the programme was applied to pupils of the experimental group, and after the completion of the probationary period post tests were applied (EQ scale, and the OMBEP). The results of the intervention programme showed a statistically significant increase in the experimental group pupils' emotional intelligence and a statistically significant reduction in the their emotional behavioural difficulties.*

Key words: *intervention, programme, emotional intelligence, behavioural and emotional problems, Oman.*

أثر برنامج تدريبي في تنمية الذكاء الانفعالي وتخفيف حدة المشكلات السلوكية والانفعالية لدى تلاميذ الصف الرابع الأساسي في محافظة مسقط بسلطنة عمان

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الملخص: *استهدفت الدراسة التحقق من فعالية التدريب في تنمية الذكاء الانفعالي وتخفيف حدة المشكلات السلوكية والانفعالية لدى تلاميذ الصف الرابع أساسي في محافظة مسقط بسلطنة عمان. تم اختيار مجموعتين متساويتين من تلاميذ الصف الرابع أساسي (٥٢ تلميذا وتلميذة)، أحدهما تجريبية (٢٦ تلميذا) والأخرى ضابطة (٢٦ تلميذا)، تحققت الباحثة من تكافؤ المجموعتين في ثلاثة متغيرات نفسية، هي: الذكاء الانفعالي باستخدام مقياس بار-أون، والذكاء المعرفي باستخدام اختبار رافن للمصفوفات المتتابعة الملونة، والمشكلات السلوكية والانفعالية باستخدام المقياس الذي أعدته الباحثة في دراسة سابقة. وقد تم إعداد برنامج تدريبي مبني على نظرية بار-أون للذكاء الانفعالي، ويتكون من (١٨) جلسة تدريبية، مدة كل جلسة (٩٠) دقيقة، بواقع جلستين أسبوعيا. وبعد التحقق من صدق البرنامج عن طريق المحكمين، تم تطبيقه على تلاميذ المجموعة التجريبية، وبعد الانتهاء من التجربة تم تطبيق الاختبارات البعدية (مقياس الذكاء الانفعالي، ومقياس المشكلات السلوكية والانفعالية). أشارت نتائج الدراسة -بشكل عام- إلى الدور الإيجابي للبرنامج العلاجي في التخفيف بشكل دال إحصائيا من حدة المشكلات السلوكية والانفعالية لدى الأطفال الذين شاركوا في المجموعة التجريبية مقارنة بأطفال المجموعة الضابطة، وكذلك دوره الايجابي في زيادة مستوى الذكاء الانفعالي لدى أطفال المجموعة التجريبية مقارنة بالمجموعة الضابطة.*

الكلمات الأساسية: برنامج تدريبي، الذكاء الانفعالي، المشكلات السلوكية والانفعالية، سلطنة عمان.

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Introduction

Researchers resort to guidance programmes of two types; collective and individual-based theories of a specific guidance in addressing the problems and treatment of behavioural and emotional disorders faced by individuals in different age groups (e.g. Al-Barak, 2006; Omar, 2008). Although the well documented effectiveness of such programmes in the treatment of many behavioural and emotional problems, they often need specialists to provide guidance in those programmes. With the emergence of EQ theory in the nineties of the last century, EQ applications soon spread to educational, administrative, clinical and other areas (Bar-On, 2000).

Emotional intelligence (EQ) refer to the "*cross section of interrelated emotional and social competencies, skills, and facilitators that determine how effectively people understand and express themselves, understand others, and relate with them, and cope with daily demands*" (Bar-On, 2006, p. 14).

Al-Beheiri (2007) argues that EQ is essential to an effective life governed by the values of success and efficiency, as well as having a preventive role in behavioural and emotional problems, and that it is the essence of the development of an individual's ability to comply with environmental variables and the establishment of stable social relations. Through effective use of EQ, the individual enjoys a more balanced and emotionally stable life, minimising neuroticism, aggression and lying (Al-Beheiri, 2007, p. 586). Studies tend to support this argument, finding a significant correlation between EQ and behavioural and emotional problems (Chu, 2005). Disturbed behaviour is characterized by failure mainly in social relations, which need flexibility in order for the individual to have sound relations with himself/herself and others. If children with low emotional intelligence lack personal and social skills necessary to fit in, they are more prone to behavioural problems, and may commit more violent crimes as they get older (Henley & Long, 1999). Studies have often asserted the role of EQ in alleviating exhibit behavioural and emotional problems (aggression, withdrawal, and lying). Coombs (2000) found that pupils with empathy skills have less aggressive behaviour in the classroom. In the same vein, consistent results of other studies (e.g. Romasz, 2003; Miller, Gouley, Shields, Dickstein, Seifer, Magee, & Fox, 2003; Renwick, 2005; Poulou, 2005) show that low empathy skills leads to the emergence of emotional problems in pupils in the classroom, such as aspects of aggressive behaviour; assaulting other peers, joining delinquent groups and lacking of respect for the teacher, becoming involved in riots, showing unethical behaviour, exhibiting verbal violence, damaging school furniture, resorting to force, and ridiculing the feelings of others, all ofwhich are associated with weak empathy and weak emotional skills.

Abdeen (2007) explored the effectiveness of a programme for developing emotional intelligence in decreasing the acuteness of behavioural problems accompanied with learning disabilities of pupils in the primary school. The sample consisted of 22 pupils (12 female, and 10 male). The results showed there was a statistically significant effect of the programme on increasing emotional intelligence, and decreasing the acuteness of the behavioural problems of pupils having learning disabilities in the primary stage.

Similarly, Kamour (2007) investigated the effect of a counseling programme based on Coleman's theory of Emotional Intelligence, and its effect on reducing aggressive behaviour and negative attitudes toward school. The sample consisted of 60 male and female students from grades 8 and 9 from the Directorate of public schools in Second Amman District, Jordan. The participants were randomely distributed to the control and experimental groups. The results showed significant differences between the mean scores of control group and experimental group in aggressive behaviours and negative attitudes towards school due to programme. In addition there was a difference in the effect of the counseling programme in favour of female participants.

In addition, Ulutas & Ömerong (2007) addressed the effect of Emotional Intelligence education on young children. The sample group were 6-year-old children attending preschool classes (N= 120). A subgroup of 40 students attended a 12-week emotional intelligence programme. After 12 weeks the children were measured in the Sullivan Emotional Intelligence Scale. Results showed that an emotional intelligence education program contributed significantly to children’s emotional intelligence levels.

Several studies in the Arab world have examined the value of intervention programmes designed to increase EQ. For example, Mattar (2004) noted the effect of a training programme based on emotional intelligence in reducing aggressive behaviour in pupils of fifth and sixth grade of a Jordanian primary school. Al-Zait (2006) found that developing EQ through play activities reduced behavioural disturbances in a kindergarten class. Al-Beheiri (2007) found that children who have received training in the components of emotional intelligence are better at social skills and have the ability to adapt more easily than their peers who have not received training. Finally, Al-Muoty (2010) found a positive effect of training on the development of some of the emotional skills to treat problems associated with low-grade academic achievement.

Based on the above, it can be concluded that the development of EQ can be achieved through training, and the growth of EQ will be accompanied by a reduction in the severity of behavioural and emotional problems. However, the researcher did not find studies conducted in the Sultanate of Oman that have adopted a training programme aimed at developing EQ.

With the emergence of emotional intelligence (EQ) at the end of the latter part of the last century, EQ applications soon spread to many educational, administrative, clinical and other areas (Bar-On, 2000). Al-Beheiri (2007) underscores the importance of EQ, stating that:

> "EQ is key to an effective life governed by the values of success and efficiency, as well as its preventive role in behavioural and emotional problems, and that the essence of the development of an individual's ability to comply with environmental variables and the establishment of stable social relations. As much as EQ the individual enjoys, the more balanced and emotionally stable he or she is, and that person will be able to avoid neuroticism, aggression and lying" (p. 586).

Studies have found a signification correlation between EQ and BEP (Chu, 2005; Liau, Liau, Teoh & Liau, 2003). Disturbed behaviour, for example, is characterized by

failure in the area of personal and social relations, which need flexibility in the individual to deal with others. Evidence suggests that children with low EQ lack the personal and social skills necessary to fit in and are more prone to behaviour problems and may commit more violent crimes as they get older (Henley & Long, 1999).

Goleman (1995) refers to one of the main reasons for behavioral problems in children which is their lack of emotional and social skills such as empathy, conflict resolution, and impulsive control. The school and parents are responsible for promoting social competences through building emotional skills at all stages of education.

This point also emphasised by Bar-On (2007), who suggest that do not provide emotional security for children making them feel frustrated, anxious, nervous, and stressed in relationships with others. This will negatively affect their school performance leading them to feel frailer, and less confident.

Many studies -as mentioned above- identified the role of EQ in reducing BEP (aggression, withdrawal, and lying). For example Coombs (2000) found that having students with empathy skills leads to a decrease in aggressive behaviour in the classroom. Various forms of aggression within the school environment including emotional instability, lack of acceptance of the school environment, temper tantrums, violence, impulsiveness, recklessness can all be controlled through EQ training programmes.

Mattar (2004) aimed to investigate the effect of a training programme based on EQ in reducing aggressive behaviour in fifth and sixth gradae pupils in primary school in Jordan. Mattar identified positive outcomes of the training programme as children in the experimental group demonstrated significantly decreased aggressive behaviour compared with children in the control group. Al-Zait's (2006) study further supports these findings. The study investigated the efficacy of play-based activities to promote the development of EQ while reducing behavioural disturbances in kindergarten age. Furthermore, Al-Beheiri (2007) found that children who had received training in the components of EQ had improved their social skills, and were more adaptable in social interactions than their peers who did not receive training. The study of Al-Muoty (2010) also found a positive effect of training in the development of some emotional skills to alleviate problems with students who experience low-grade academic achievement.

In a similar vein, other studies (e.g.: Al-Ajmi, 2012; Farraj, 2005; Romasz, 2003; Miller *et al*., 2003; Renwick, 2005; Poulou, 2005) consistently found that low empathy skills lead to the emergence of emotional problems in students in the classroom, such as aggressive behaviour; assaults made on peers and staff, increased membership of delinquent groups/gangs, lack of respect for staff members, riotous behaviour, verbal assaults, damaging school furniture, resorting to force, ridiculing the feelings of others, all of which demonstrate weak empathy and emotional skills.

It can, therefore, be concluded that the development of EQ can be attained through training, and improved EQ will be accompanied by a reduction in the severity of BEP.

The researcher did not find studies conducted in the Sultanate of Oman that prepare a TIP aimed at developing EQ, and reducing the severity of behavioural problems in primary school. Therefore, this study will develop a TIP for fourth grade students at the governorate of Muscat, Sultanate of Oman, and will examine its effectiveness in increasing EQ and the decreasing BEP.

Rationale:

The importance of this study is represented in the following aspects:

1. There is not any intervention programme prepared for Omani children, which aims at developing EQ and reducing behavioral problems. Thus developing this intervention programme will help to fill a real gap in the Omani psychological library.
2. Parents and teachers can take advantage of the study's results to face the behavioral problems and discover methods of developing the EQ of their children.
3. The possibility of generalising the results of the study to the children in the governorate of Muscat is paramount.
4. Teaching children through the training programme of the correct methods of dealing with behavioral and emotional problems.
5. The training programme prepared in this study will benefit teachers and parents when dealing with behavioral and emotional problems.

Hypotheses of the intervention:

There will be significant differences ($p<.05$) between the scores of the control and experimental group in:

1. The EQ post-test scores
2. The BEP, post-test scores
3. The EQ follow-up test scores
4. The BEP follow-up test scores
5. The pre-test, post-test and follow-up EQ test scores
6. The pre-test, post-test and follow-up BEP test scores

It is anticipated that consistently favourable scores will be found for the experimental group.

Method

Approach of intervention:

Experimental methodology was used to achieve the objective of the study, the design used experimental and control groups with pre-testing and post-testing, known as Two-Group-Pretest-Treatment-Posttest Design (Mertler & Charles, 2011).

The variables:

The Independent Variable (IV) is the TIP. And the Dependent Variables (DVs) are: EQ, and BEP.

Participations:

A sample of 52 males and females were selected from Madinat Alsultan Qaboos Basic School from grade four. They were divided randomly into two groups, 26 in each group (experimental and control). Table 1 shows the distribution of the study sample according to group and gender.

Table 1: Distribution of the study sample by gender, and group

Gender/ Group	Experimental	Control	Total
Boys	9	14	23
Girls	17	12	29
Total	26	26	52

Materials:

To achieve the aim of this study three tools were used:

a- Omani measure of behavioural and emotional problems (OMBEP), OMBEP consists of 48 items equally divided into 6 dimensions: social problems, attention problems, aggression, rebellious behaviour, anxiety, and depression. Parents of 443 children in grades 1-4 rated the behaviour of their children, grading the frequency of each behaviour as occurring: often, sometimes, or never. For the scoring purpose often (3), sometimes (2), and never (1). validity was verified by face and factorial validity, and reliability, as measured by Cronbach's alpha, was satisfactory 0.93. For more details refer to Al Said, Birdsey, & Stuart-Hamilton, (2011).

b- Bar-On Emotional Quotient Inventory Youth Version (Bar-On EQ-i: YV (S), The *Bar-On* EQ-i: YV (S) was developed for situations where time is of the essence, where the individual being tested has limited reading or comprehension abilities, where the respondent might be fatigued from a longer set of items, or where multiple administrations of the instrument are desired. The short form was developed using the large normative sample of the EQ-i: YV (N= 9,172). The goal was to develop a scale that would include a sufficient number of items (6 per scale) to reliably assess Intrapersonal, Interpersonal, Stress Management and Adaptability competencies (the sum of which would render a total EQ scale). It was determined that the EQ-i: YV (S) would also include the same 6-item Positive Impression scale included in the EQ-i: YV. Thus, the EQ-i: YV (S) would have 30 items. The 6-item Intrapersonal scale was retained from the long form. For the Interpersonal, Stress Management and Adaptability scales from the long form, the item-pool for each scale was subjected to confirmatory factor analysis, testing a uni-dimensional model. To create 6-item versions of each subscale, only the 6 items with the highest loadings with the latent variables were used (Bar-On & Parker, 2000).

c- Raven's Coloured Progressive Matrices Test (CPM), The test consists of 36 matrices divided equally into three sets (A, AB, B). In each matrix, there are six choices (alternative answers). The test is used with children from the age 5 to 11 years. 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 alternative

answers. The matrices in set B depend on the development of the child's ability to think in abstract terms. The psychometric properties of the test are widely accepted (Raven, Court, & Raven, 1990, 2002). In the Arab world, the test has been standardized in many countries including Oman, and its psychometric properties have been found to be acceptable (Kazem *et al*., 2009).

Training Intervention Programme (TIP):

A training programme (called Tagharid Intervention Programme *TIP*) aims to increase EQ in children, and to reduce levels of BEP of pupils in the fourth grade (aged 8-9 years) in the Sultanate of Oman. The proposed programme relies on the Omani traditional games that aim to develop a number of individual and group skills. The programme also relies on providing participants with emotional skills that makes them more insightful about themselves as well as about others.

The programme was based on a review of a large number of previous studies in this field of research (e.g. Al-Beheiri, 2007; Al-Mufti, 2002; Al-Zait, 2006; Eichmann, 2009; Al-Muoty, 2010; Landau & Meirovich, 2011; Filella, Soldevila, Cabello, Franco, Morell, & Farre, 2008; Omar, 2008; Reissland, 2012; Veitch, 2011; Zijlmans, Embregts, Gerits, Bosman, & Derksen, 2011). These studies were used in selecting the materials and steps followed, duration of training, activities, and evaluation. Below is a description of the steps taken to develop the programme:

Programme Objectives

In general, the programme aims to reduce levels of BEP of pupils in the fourth grade in the Sultanate of Oman through developing their EQ. The programme objectives are to:

- Develop EQ for male and female fourth grade pupils in the Sultanate of Oman on the basis of Bar-On's EQ inventory, including: Intrapersonal skills, Interpersonal skills, stress management, adaptability, and making a positive impression on people they interact with.
- Reduce levels of BEP in fourth grade basic education in female and male pupils in the Sultanate of Oman, in the light of the factors which make up the OMBEP developed earlier in this study, which are: social problems, attention problems, aggression, rebellious behaviour, anxiety, and depression.

Programme Corners

The programme corners consist of:

- Arts corner.
- Music corner.
- Constructive games corner.
- Dismantling and reassembling games corner.
- Educational games corner.

Training Sessions Plans

Each of the TIP sessions will include the following:

- Session title.
- Date, time, and duration of the session's implementation.
- Session goals.
- Techniques used.

- Tools and materials used.
- Session content.
- Game/Activity.
- Type of game/activity.
- Homework assignment.

Training Sessions Content

Each of the TIP sessions include:

- Welcoming group members initially.
- Reviewing lessons learned from previous session.
- Discussing homework assignments.
- Discussion session of main topic.
- Practicing methods, activities, procedures to achieve the goals of the session.
- Evaluation of the session at its conclusion.

Programme and Schedule Description

The TIP is comprised of 30 hours, distributed over 18 training sessions, including 1.5 hours for each session (two classes). Overall, the programme duration is 64 days. Table 2 contains the TIP schedule.

Table 2: The TIP schedule

Week	Day & date	#	Session title
First	Sunday 18/9/2011	1	Introduction session
	Tuesday 20/9/2011	2	EQ
Second	Sunday 25/9/2011	3	Knowing onerself
	Tuesday 27/9/2011	4	Expressing feelings
Third	Sunday 2/10/2011	5	Controlling emotions
	Tuesday 4/10/2011	6	Social communication
Fourth	Sunday 9/10/2011	7	Starting a conversation
	Tuesday 11/10/2011	8	Good listening
Fifth	Sunday 16/10/2011	9	Concluding a conversation
	Tuesday 18/10/2011	10	Social skills
Sixth	Sunday 23/10/2011	11	Time management
	Tuesday 25/10/2011	12	Empathy and Emotion management
Seventh	Sunday 30/10/2011	13	Motivation and Emotion management
	Tuesday 1/11/2011	14	Problem solving
Note: Pupils did not attend programme for one week due to Eid AlDha holidays			
Eighth	Sunday 13/11/2011	15	Taking decisions
	Tuesday 15/11/2011	16	Accepting criticism from others
Ninth	Sunday 20/11/2011	17	Forming positive attitudes and friendships
	Tuesday 22/11/2011	18	Concluding session

The selection of topics of the TIP covered the five areas of EQ development, with the exception of the first session and the last being the opening session, and closing session of the programme respectively. Session number 2 develop the general idea of the theme of EQ, and sessions 3-5 develop Intrapersonal skills, and sessions 6-10 develop communication skills with others, Interpersonal skills, and 11-12 develop Stress Management skills, and 13-15 promote Adaptability, the 16-17 sessions develop making a positive impression.

The selection of games and activities was based on the aims of the training session, and their relevance to the grade level, and to attract the attention of the students. Therefore, each game develops a particular aspect of the student's. This is

linked to the development of EQ on the one hand, and helps alleviate behavioural problems on the other hand.

Moreover, homework assignments were incorporated to complement the TIP. It was decided that the student may not be able to achieve the desired goals alone thus the participation of parents was necessary, These assignments aim to reinforce the main ideas of the training session and prepare the student for the next meeting. In this regard, research (e. g. Nord, Brimhall, & West, 1997) suggests that parents' involvement in their children's schools is advantageous and does make a difference to their children's education.

TIP Implementation Phases

Before the beginning of the programme, the researcher held a general meeting attended by the parents and guardians of the participating pupils. The meeting was also attended by the school principal, the social worker, and the class teacher. The researcher introduced herself to the parents, and explained the goals and objectives of the programme, its topics, techniques and strategies. Opening up the discussion at the end, the researcher asked the parents for written approval of the student's participation in the TIP. Table 3 shows the phases of the TIP, and number of sessions in each training phase.

Table 3: TIP implementation phases

#	Phases	Session
1	Introductory phase: This phase witnesses a pre-test of the experimental and control groups, and agreement with a number of experimental group individuals on training session venues and timings.	1
2	Transition phase: This phase defines EQ topics and components, in a simple manner that is suitable for the age groups of basic education pupils of fourth grade.	2
3	Construction phase: This phase is considered to be the foundation of TIP, in which training is conducted based on EQ development methodology by providing participants with appropriate information.	3-17
4	Conclusion phase: This session witnesses the evaluation of the training sessions of the experimental group through noting their opinions of them. Behavioural and EQ post-test is also applied, then participation certificates and nominal gifts are distributed to pupils.	18

Arbitration Programme:

The TIP involved a group of arbitrators who are specialists in educational psychology, growth psychology, and educational and psychological counseling. They were asked to express their opinion regarding the duration of the programme, the adequacy of the number of sessions and duration of each session, and the appropriateness of the content of sessions for pupils' age level.

Based on the analysis of the views of the arbitrators, the number and length of each session was decided. As for the content of the programme, the arbitrators have made some notes on it, and all were taken into account, making the programme ready for implementation on the study.

Procedures for the study:

Having secured permission from the Technical Office for Studies and Development, Ministry of Education, the sample was randomly selected from one of

the schools in Muscat's six Wiliyats which is Wiliyat Bousher. From this Wiliyat one school was selected randomly.

The parents of the children in the two classes of grade four in this school were invited for a meeting with the researcher, the school principal, and research assistants before starting the experiment. During this meeting the school principal welcomed attendees, and informed them of the importance of obtaining all formal approval to conduct the pilot study on a sample of pupils at the school, and informed them of the importance of scientific studies in the development of teaching and learning processes, and its positive effects on their children. The researcher then gave a presentation of the pilot study that explained the purpose of the experiment, procedures for implementation, the method of selecting the sample, and the TIP in terms of established theory, duration, and the content of its sessions. She also talked about the role of parents in encouraging their children to complete the homework. In addition, the study took into consideration the ethics of research including their right to withdraw from the experiment at any time. Importantly, the researcher was cautious not cause any psychological or physical harm to participants in the experiment. The floor was then opened for discussion and dialogue, The researcher concluded the presentation by discussing a sample form which respects the rights of participants in the TIP, plus the approval of the guardian to his son/ daughter's participation in the study. The parents who did not attend the induction, meeting, have pledged to submit a form and the approval of the guardian to the school administration, and with these procedures, the researcher was able to obtain the consent of all parents and guardians.

After obtaining the parents' consent, one of the two class grade four's was assigned randomly to the control group, and the other to the experimental group. For the purpose of achieving quality between the two groups it was decided to move five students from one group to the other group.

Three measures (Ba-On, OMBEP, and CPM) were administered to the children in the first session of the experiment to obtain equivalence between the two groups. Below is a detailed analysis of each measures.

Means and standard deviations for Bar-On EQ scale were calculated for each groups, and the result are shown in table 4 (refer to appendix). To examine the significance in differences in means between the experimental and control groups MANOVA was used, and the results revealed no statistically significant multivariate differences in EQ pre-test by group (Wilks' Lambda = .868; $F_{5,46}$ = 1.395, p < .244; η^2_p = .132), which indicates similarity between the experimental and control groups in EQ. And Table 5 (refer to appendix) shows that.

Means and standard deviations for OMBEP scale were calculated for each groups, and the result are shown in table 6 (refer to appendix). To examine the significance in differences in means between the experimental and control groups MANOVA was used, and the results revealed no statistically significant multivariate differences in the OMBEP pre-test by group (Wilks' Lambda = .962; $F_{6,45}$ = .296, p < .936; η^2_p = .038) which indicates similarity between the experimental and control groups in OMBEP. Table 7 (refer to appendix) shows that.

Using t- test (as in table 8 refer to appendix), show no significant differences between experimental and control groups in the CPM test.

Data Analysis

After the completion of the application process and data collection phase the data analysis phase started by using the Statistical Package for Social Science (SPSS). In order to examine the hypotheses of the study, the following statistical methods were used :

- Means (M), and standard deviations (SD).
- T- test.
- one-way ANOVA.
- Multivariate analysis of variance (MANOVA).
- Multivariate analysis of covariance (MANCOVA).
- Repeated measures of multivariate analysis of variance (MANOVA).
- Eta squared (η^2_p).

Results

Multivariate analysis of covariance (MANCOVA), and repeated measures multivariate analysis of variance (MANOVA) were employed to test all hypotheses. All data were suitable for these analyses in terms of normality, linearity, and homogeneity. Additionally, all planned comparisons were conducted using Wilks' Lambda.

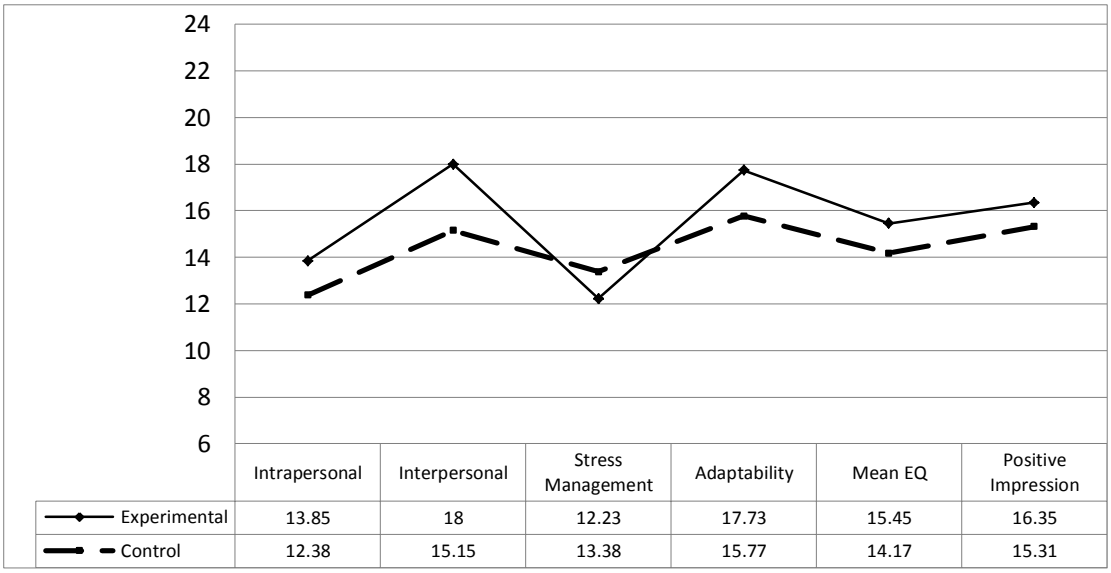
Testing of the first hypothesis: "There will be significant differences (p<.05) between the scores of the control and experimental group on the EQ post-test scores."

To test this hypothesis means and standard deviations were calculated as shown in Table 9 (refer to appendix). To examine the significance in the differences in means between the experimental and control groups MANCOVA was used, and the results revealed statistically significant multivariate differences in EQ post-test by group (Wilks' Lambda = .641; $F_{5,45}$ = 5.051, p < .001; η^2_p = .359), but the covariance (IQ) was not statistically significant (Wilks' Lambda = 0.961; $F_{5,45}$ = .362, p < .872; η^2_p = .039). To investigate the source of variance, follow-up univariate analyses were run. The results are shown in Table 10 (refer to appendix).

As Table 10 shows, the variable cognitive intelligence (IQ), which is the covariance is not statistically significant in any of the components of EQ, and thus IQ has no effect on the similarity between experimental and control groups. As can be seen from Table 10 there are four significant dimensions between the two groups in post-test and these dimensions are Intrapersonal, interpersonal, adaptability, and total EQ. From Table 9 which includes means for the two experimental and control groups in the post-test, it can be noted that the mean for the experimental group is higher than the control group in all four dimensions. Figure 1 shows the graph of means of the test for the two dimensions in EQ.

With this result the alternative hypothesis has been accepted. The alternative hypothesis states that the performance of the experimental group at post-test is

better than the control group in EQ. This means that the TIP had a positive role in increasing the level of EQ among the students of the experimental group.



	Intrapersonal	Interpersonal	Stress Management	Adaptability	Mean EQ	Positive Impression
Experimental	13.85	18	12.23	17.73	15.45	16.35
Control	12.38	15.15	13.38	15.77	14.17	15.31

Figure 1: Graph of post-test mean scores experimental and control groups on EQ

Testing of the second hypothesis: "There will be significant differences (p<.05) between the scores of the control and experimental group in the behavioural and emotional problem post-test scores."

To test this hypothesis means and standard deviations were calculated, as shown in Table 11 (refer to appendix). To examine the significance in differences in means between the experimental and control groups MANCOVA was used, and the results revealed no statistically significant multivariate differences in BEP post-test by group (Wilks' Lambda = .812; $F_{6,44}$ = 1.693, p < .145; η^2_p = .188), and the covariance (IQ) was not statistically significant (Wilks' Lambda = 0.810; $F_{6,44}$ = 1.722, p < .138; η^2_p = .190). To investigate the source of variance, follow up univariate analyses were run. Results are shown in Table 12 (refer to appendix).

As Table 12 shows, the variable cognitive intelligence (IQ), which is the covariance is not statistically significant in any of the degrees of BEP, except for the third dimension, "Rebellious behavior", which generally means the IQ covariance has no effect. As can be seen from Table 12, the four dimensions between the two groups in post-test are: Social problems, attention problems, behavioural problems, and average problems. After returning to Table 11, which includes Means for the two experimental and control groups in the post-test, it was found that the average of the experimental group is lower than the control group in all four dimensions. Figure 2 shows the graph of the means of the post test for the two groups in BEP.

With this result the alternative hypothesis has been accepted. The alternative hypothesis states that the level of BEP in the post-test in the experimental group is less than the level of the control group. This means that the TIP had a positive role in reducing BEP among the pupils of the experimental group.

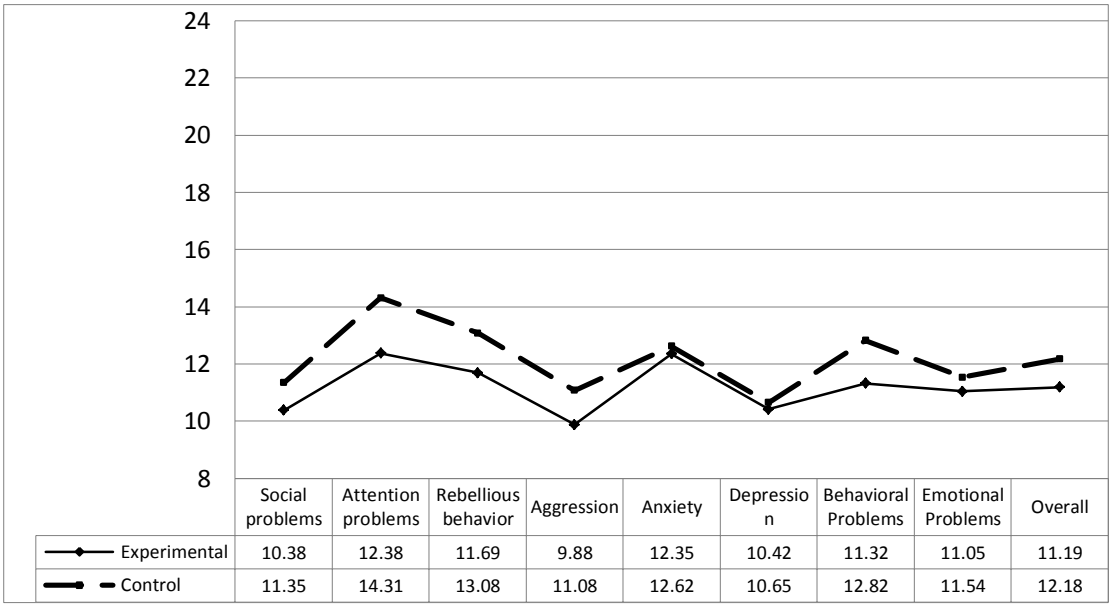


Figure 2: Graph of post-test mean scores experimental and control groups on OMBEP

Testing of the third hypothesis: "There will be significant differences (p<.05) between the scores of the control and experimental group on the EQ follow-up test scores."

To test this hypothesis means and standard deviations were calculated, and Table 13 (refer to appendix) includes them as below.

To examine the significance in difference in means between the experimental and control groups MANCOVA was used, and the results revealed statistically significant multivariate differences in the EQ follow-up test by group (Wilks' Lambda = .348; F5,45 = 16.888, p < .000; η2p = .652), but the covariance (IQ) was not statistically significant (Wilks' Lambda = 0.924; F5,45 = .741, p < .597; η2p = .076). To investigate the source of variance, follow-up univariate analyses were run. Results are shown in Table 14 (refer to appendix).

As Table 14 show), the variable, cognitive intelligence (IQ), which is the covariance is not statistically significant in any of the components of EQ, and so there is no IQ effect on similarity between experimental and control groups. As can be seen from Table 14 that statistically significant differences exist in all components of EQ. After returning to the Table 13 which includes the means for the two experimental and control groups at the follow-up test, it was found that the average of the experimental group is higher than the control group. Figure 3 shows the graph of the arithmetic average follow-up to test the two groups in EQ. The result accepts the alternative hypothesis, which states that the performance of the experimental group in the follow-up test is better than the control group in terms of EQ. This means that the TIP had a positive role in increasing the level of EQ among the pupils of the experimental group.

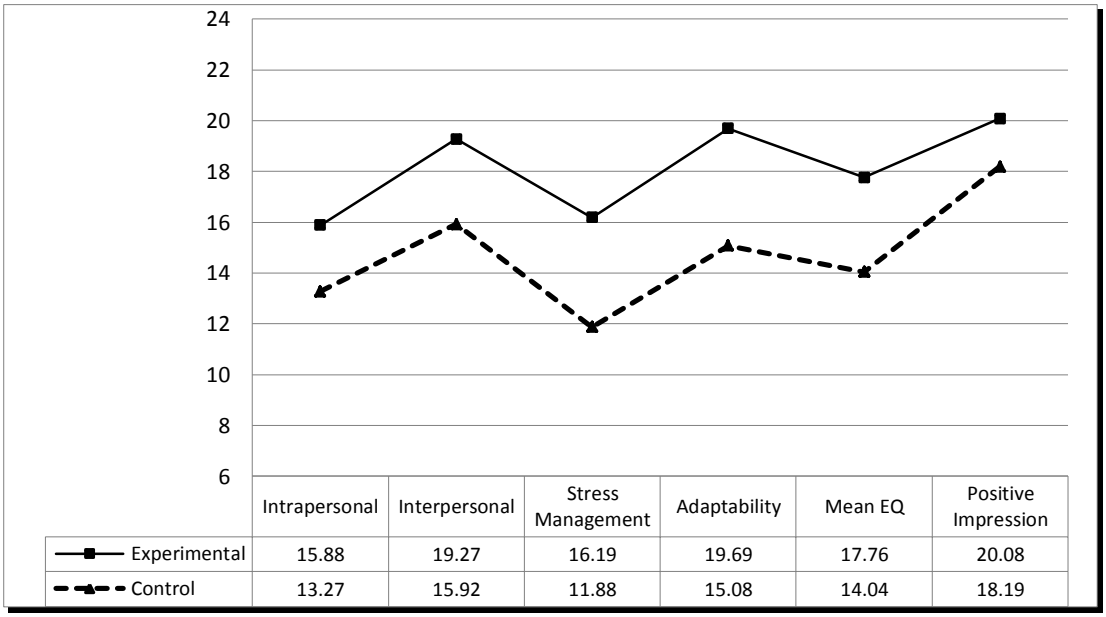


Figure 3: Graph of follow-test mean scores experimental and control groups on EQ

Testing of the fourth hypothesis: "There will be significant differences (p<.05) between the scores of the control and experimental group in BEP follow-up test scores."

To test this hypothesis means and standard deviations were calculated, as shown in Table 15 (refer to appendix). To examine the significance in differences in means between the experimental and control groups, MANCOVA was used, and the results revealed statistically significant multivariate differences in the BEP follow-up test by group (Wilks' Lambda = .583; $F_{6,44}$ = 5.247, p < .000; η^2_p = .417), but the covariance (IQ) was not statistically significant (Wilks' Lambda = 0.885; $F_{6,44}$ = .949, p < .470; η^2_p = .115). To investigate the source of variance, follow up univariate analyses were run. The results are shown in Table 16 (refer to appendix).

As can be seen in Table 16, the IQ is not statistically significant in any of the components of BEP, and thus there is no IQ effect on the similarity between experimental and control groups. As can be seen from Table 16, all dimensions of BEP are significant, and after returning to Table 15 which includes Means for the two experimental and control groups at follow-up test, it was found that the average of the experimental group was lower than the control group. Figure 4 shows the graph of the means of follow-up tests in BEP.

The result has been to accept the alternative hypothesis, which states that the level of BEP in the follow-up test of the experimental group is less than the level of the control group. This means that the TIP had a positive role in reducing BEP among the students of the experimental group.

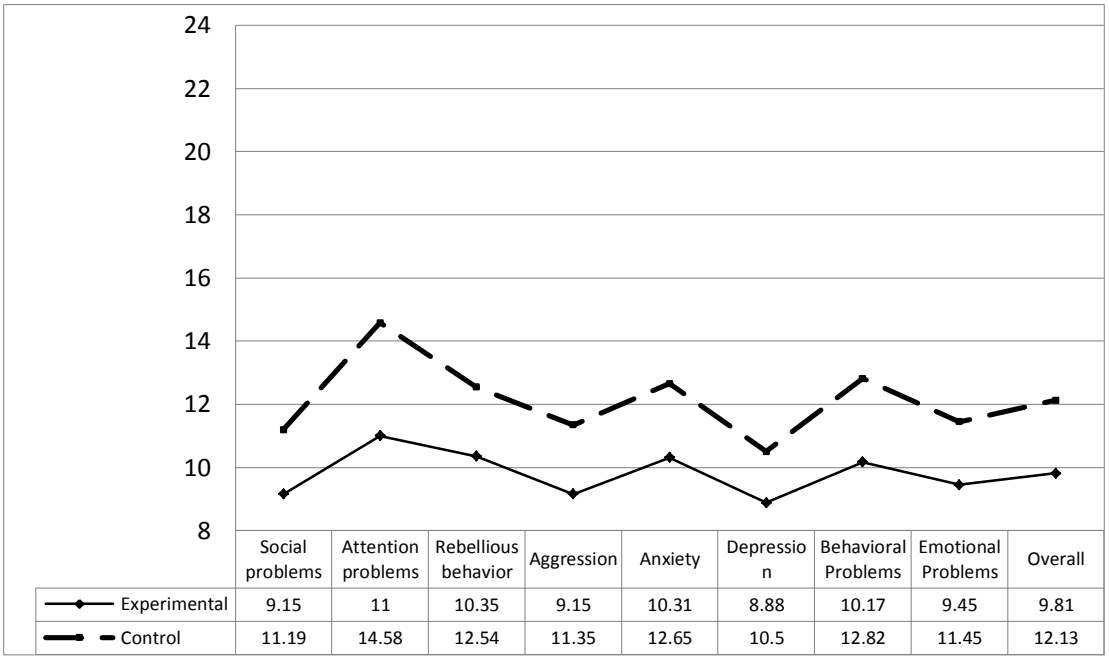


Figure 4: Graph of follow-test mean scores experimental and control groups on OMBEP

Testing of the fifth hypothesis: "There will be significant differences (p<.05) between the scores of the control and experimental group in the pre-test, post-test and follow-up EQ test scores."

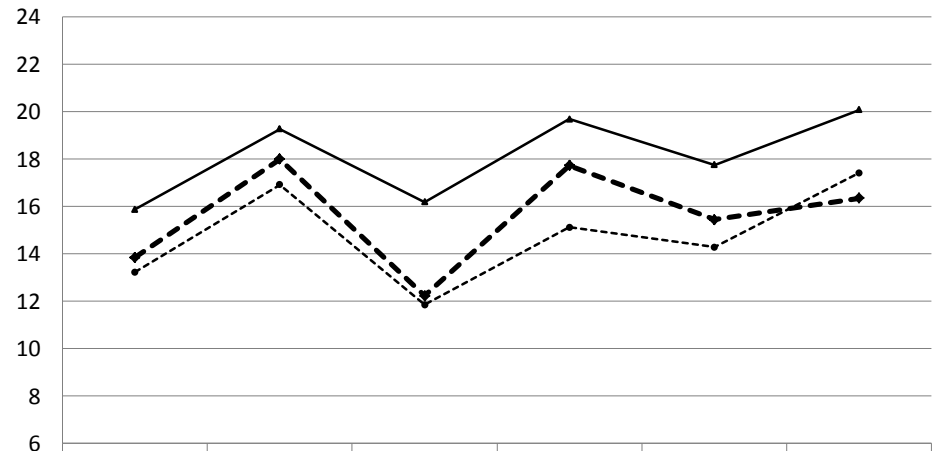
To test this hypothesis, the means and standard deviations were calculated, as shown in Table 17 (refer to appendix). To investigate the significant differences in means between the three responses of pre, post and follow-up tests, the repeated measures of multivariate analysis of variance (MANOVA) were used, and the results revealed statistically significant multivariate differences in EQ by times (Wilks' Lambda = .04; $F_{10,16}$ = 38.051, p < .000; η^2_p = .960), and this evidence suggests that the TIP had an effect in the development of EQ. Table 18 (refer to appendix) shows a summary of the results of repeated MANOVA measures for each result, after verifying the overall significant differences.

As Table 18 shows, all calculated values of F are statistically significant, and this suggests significant differences between the means in the three tests (pre, post and follow-up) in the experimental group. To find out the direction of the differences the Bonferroni test for multiple post-test comparisons was used. Comparisons were made between two of the three tests in each dimension. Table 19 illustrates the results.

As Table 19 (refer to appendix) shows the pair comparisons between post and pre-tests in four dimensions: intrapersonal, interpersonal, stress management, and positive impression, show significant differences in both pre and post-tests, and post and follow-up, in favor of the follow-up.

The comparisons in the dimensions, adaptability and total EQ were significant in the pre and post-tests, for the post-tests, and between the pre and follow-up tests, for the follow-up, between the post and follow-up for the follow-up test. Figure 5 shows the graph of the means of the three tests (pre, post, and follow-up) in

EQ. With this result, the alternative hypothesis has been accepted, which states that the average of the experimental group in the follow-up test is better than pre and post-tests in EQ. This means that the TIP had a positive role in increasing the level of EQ among the students of the experimental group.



	Intrapersonal	Interpersonal	Stress Management	Adaptability	Mean EQ	Positive Impression
Pre	13.23	16.92	11.85	15.12	14.28	17.42
Post	13.85	18	12.23	17.73	15.45	16.35
Follow	15.88	19.27	16.19	19.69	17.76	20.08

Figure 5: Graph of pre-test, post-test and follow-test mean scores of experimental group on EQ

Testing of the sixth hypothesis: "There will be significant differences (p<.05) between the scores of the control and experimental group in the pre-test, post-test and follow-up behavioural and emotional problem test scores."

To test this hypothesis means and standard deviations were calculated, as shown in Table 20 (refer to appendix).

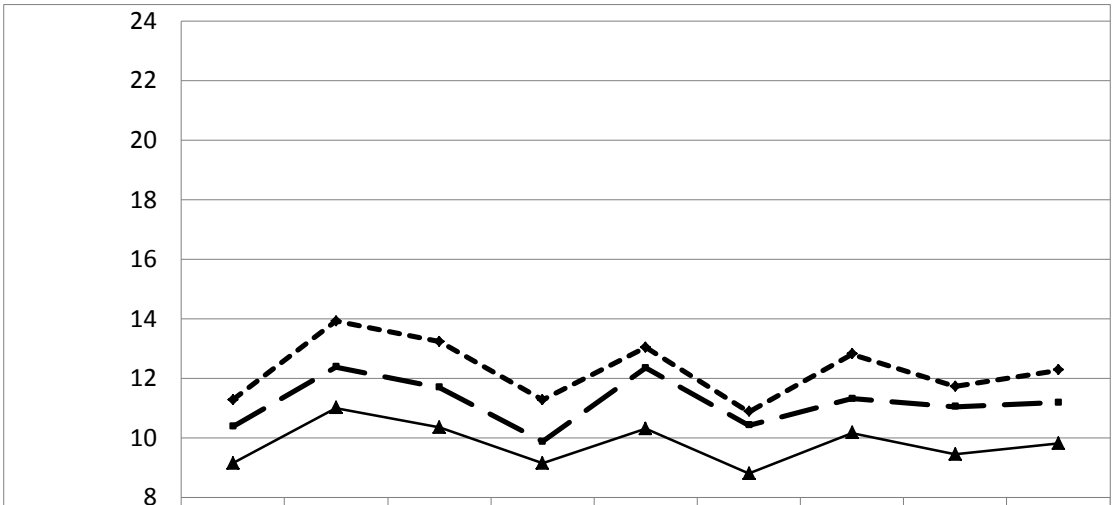
To investigate the significant differences in means between the three responses of pre, post and follow-up tests, analysis has been carried out using the repeated measures of multivariate analysis of variance (MANOVA), and the results revealed statistically significant multivariate differences in OMBEP by time. (Wilks' Lambda = .157; $F_{10,16}$ = 6.251, p < .007; η^2_p = .843), and this evidence suggests that the TIP had an effect in the reduction of OMBEP. Table 21 (refer to appendix) shows a summary of the results of repeated measures MANOVA for each result, after verifying the significant differences overall.

As Table 21 shows, all calculated values of F are statistically significant, and this evidence suggests that there are significant differences between the means of the three tests (pre and post and follow-up) in the experimental group in BEP. To find out the direction of the differences, the Bonferroni test for multiple comparisons was used. Comparisons were made between two of the three tests in each dimension. Table 22 (refer to appendix) shows the results. Table 22 shows that pair comparisons between post and pre-tests are not significant in four dimensions: aggression, emotional problems, depression, and anxiety, while the comparison is

significant in favor of follow-up tests between pre and follow-up tests, and post and follow-up tests.

The comparisons in other dimensions are: social problems, attention problems, rebellious behaviour, behavioural problems, and average problems. It was significant between the pre and post-tests for the post- tests, and between the post-tests and follow-up tests. for the follow-up, and between the two tests the post and follow-up for the follow-up tests. Figure 6 shows the graph of the means of the three tests (pre and post and follow-up) in BEP.

With this result the alternative hypothesis was accepted, which states that the level of the experimental group in the follow-up test is lower in pre and post-tests in BEP. This means that the TIP had a positive role in reducing BEP among the students of the experimental group.



	Social problems	Attention problems	Rebellious behavior	Aggression	Anxiety	Depression	Behavioral Problems	Emotional Problems	Overall
Pre	11.27	13.92	13.23	11.27	13.04	10.88	12.81	11.73	12.27
Post	10.38	12.38	11.69	9.88	12.35	10.42	11.32	11.05	11.19
Follow	9.15	11	10.35	9.15	10.31	8.8	10.17	9.45	9.81

Figure 6: Graph of pre-test, post-test and follow-test mean scores of experimental group on OMBEP

Discussion:

The alternative hypotheses (first, third and fifth) focused on the effect of the TIP on improving the level of EQ in students in the fourth elementary grade through comparisons between both experimental and control groups in the post and follow-up tests (the first and the third hypotheses), and through comparisons between the three tests (pre, post, and follow-up) in the experimental group of pupils (fifth hypothesis). The result showed –in general– that TIP had a significant effect on improving the level of EQ of students. This result shows clearly, the success of the TIP, in the development of EQ. Table 23 shows the results of the three hypotheses relating to EQ.

Table 23: Summary of the effect of the TIP on EQ

Domains	Experimental vs. control		Repeated measures		
	Post	Follow	Pre-post	Pre-follow	Post-follow
Intrapersonal	√	√	-	√	√
Interpersonal	√	√	-	√	√
Stress Management	-	√	-	√	√
Adaptability	√	√	√	√	√
Total EQ	√	√	√	√	√
Positive Impression	-	√	-	√	√
Hypothesis	1	3	5	5	5

On the other hand, the other alternative hypotheses (second, fourth and sixth) dealt with the effect of the TIP in reducing BEP in pupils in fourth grade through comparing both experimental and control groups in post and follow-up tests (second and fourth hypotheses), and through the comparison between the three tests (pre, and post, and follow-up) in the experimental group students (sixth hypothesis). The result showed that -in general, that TIP had a significant effect on the reduction of BEP among students. This result shows clearly the effectiveness of the TIP in the treatment of BEP. Table 24 shows the result of the three hypotheses relating to BEP.

Table 24: Summary of the effect of the TIP in BEP

Domains	Experimental vs. control		Repeated measures		
	Post	Follow	Pre-post	Pre-follow	Post-follow
Social problems	√	√	√	√	√
Attention problems	√	√	√	√	√
Rebellious behaviour	-	√	√	√	√
Aggression	-	√	-	√	√
Anxiety	-	√	-	√	√
Depression	-	√	-	√	√
Behavioural Problems	√	√	√	√	√
Emotional Problems	-	√	-	√	√
Average Problems	√	√	√	√	√
Hypothesis	2	4	6	6	6

The results of the effect of the TIP are consistent with the results of previous studies in this area, which concluded that training will improve the level of EQ and reduce behavioural problems in the sample. A significant correlation has previously been noted between EQ and behavioural problems (Chu, 2005). Behavioural disturbance is characterised by behavioural aspects of personal failure led by social relations, which need to be flexible so that the individual is in harmony with him/herself and with others (Henley & Long, 1999). The results replicate the findings of the study by Coombs(2000). The study argued that when pupils acquire skills this leads to a reduction in aggressive behaviour in the classroom. This is also consistent with the results of a study by (Mattar (2004) which showed a positive effect of a training programme, that resulted in a decrease in aggressive behaviour among the pupils of the experimental group.

Similarly, in agreement with this study by Al-Zait (2006) which reported positive effectiveness of play activities in the development of EQ in reducing behavioural disturbances in kindergarten children. The study by Al-Beheiri (2007) is also consistent with the present study. Al-Beheiri found that children who had

received training in the components of EQ had better social skills, and had the ability to adapt compared to their counterparts who had not received training.

Another supporting study by Al-Muoty (2010) found a positive effect of training on the development of some emotional skills in reducing the problems of low-grade academic achievement.

The reduction in BEP through the development of EQ can be attributed to the properties of EQ, which can be learned at any age, and can be taught as skills in the classroom. The teacher can teach the student how to control anger, how to manage conflicts, and how to develop the ability to be assertive with others. These skills all emerge through the development of EQ (Cooper, 1997; Jaeger, 2001). In this area Al-Beheiri (2007) says that EQ is the entrance to an effective life governed by the values of success and efficiency. EQ also plays a role in preventing BEP. EQ is the essence of the development of an individual's ability to cope with environmental variables and the establishment of stable social relations. An individual who utilizes EQ factors and their components enjoys happiness and emotional equilibrium and is saved from introversion and neuroticism, aggression and lying.

Thus, training pupils to use the skills of EQ leads to understand emotions, and control them. It helps when making decisions, and controlling negative emotions. They have the ability to objectively assess their emotions, and how to harmonize emotions with the importance of the problem or situation, as well as developing the ability to acknowledge the emotions of others. These skills will help them to control BEP.

The success of the TIP in increasing levels of EQ, and reducing behavioural problems can be attributed to several reasons including the efficiency of the TIP, the accuracy of the study procedures in the application of the programme, as well as the concepts and nature of the study.

In this study, the TIP provided activities for pupils, which gave them the opportunity to recognize the attitudes that reflect various EQ dimensions, based on situations that can occur in class or outside the classroom through interaction with other students, or through dealings with teachers. It also gave children the opportunity to self-assess, and discover sources of strength and weakness, and attitudes that need to be reviewed and adjusted to achieve a greater degree of EQ. The pupils learn different strategies for the development of EQ, which are practiced in daily life such as self-dialogue strategy, discussion, asking questions, and homework.

The programme has provided appropriate opportunities for pupils to express their emotions through different, substantive activities, and perform the roles of other characters through the plays that they have implemented. Example of these activities are, a game called *"each child selects a mask*" reflecting his feeling at the time of the activity, in order to express their feelings. The programme also provided many opportunities for pupils to observe behavioural models, such as characters and situations from Omani folklore "*WAFQA SHANNON TABAQAH* that is: *Like will to like*", which explain interpersonal skills in a variety of life situations. This is what makes students integrate into teamwork through working in small groups. This practice provides a social atmosphere of cooperation and mutual trust of others. The

programme also offers a number of stories from the heritage of the Sultanate of Oman which provides pupils with opportunities to criticize and reflect on wrong behaviour. This is what made them pay attention to their behaviour when they interacted with others and observe to the reactions of others.

The success of TIP is also attributed to accurately identifying the desired goals which helped to improve the performance of the experimental group at post-test and follow-up test. As clarity of goals has an effect on improving performance and quality. The researcher also sought to provide ongoing feedback to pupils both at the beginning of the session, in the middle, or at the end; because feedback is instrumental in the development of competence in pupils.

Games, plays and activities, were selected on the basis of their capacity for integration into the theme of the training session, and their ability to consolidate the interest required by pupils in fourth grade. We found that each game develops a particular aspect of a pupil's personality which is linked to the development of EQ. In addition,, it assists in the reduction of behavioural problems. The researcher focused on homework to complement the TIP. The parents participated in the implementation of homework becasue TIP is not sufficient to achieve the desired goals,

In addition to the aforementioned highly accurate procedures of the TIP, the researcher planned each session efficiently which is clearly reflected in the behaviour of pupils, especially hyperactive students, as they were in the first two weeks uncomfortable and restrained, but later were integrated into the activities and seemed comfortable.

The programme is divided -as stated- into four main stages, a preliminary stage, a transitional stage, a construction stage, and the final stage. Therefore, they follow a logical sequence. From teachers and parents' feedback, as well as the researcher's observations, it was noted that the students demonstrated progressively positive changes in the sessions of the programme, especially students who have BEP. For example, a parent reported that her child showed a behavioral problem before participating in the programme, and she noted that the programme reduced this behavioral problem. Similarly, the teachers expressed that positive changes occurred in the behaviour of students, a month after the start of the TIP. These indicators demonstrate the success of the initial TIP.

Recommendations

1. Preparation of training programmes for teachers to assist in the identification diagnosis of behavioural, and emotional problems, and appropriate ways of dealing with and reducing these behaviours.
2. Preparation of training programmes for parents on the appropriate methods of dealing with BEP.
3. Issuing Bulletins and booklets containing information on BEP, and the role of EQ in eliminating and reducing them.
4. Include information on EQ skills in the curriculum in terms of its concepts and its role in everyday life.

5. Focus on play activities as a way of dealing positively with problematic pupils and to reduce BEP.

Suggestions

1. In order to generalize the results to all the children of the Sultanate of Oman, the study must be conducted again in other governorates of the Sultanate, and then compared with the results of the current study, if the results are similar, the programme can then be generalized to all children.
2. This study can be conducted again with other age groups to ensure the feasibility of training in reducing behavioral problems and increasing the level of EQ.

References

Abdeen, H. S. M. (2007). *A suggested program to develop the emotional intelligence and its effectiveness on decreasing the acuteness of behavioral problems of pupils having learning disabilities in the stage*. (Unpublished PhD thesis), Alexandria University, Egypt, (in Arabic).

Al Said, T.T., Birdsey, N., & Stuart-Hamilton, I. (2011). *The development and validation of a Omani measure of behavioural and emotional problems (OMBEP) for young Omani school children. Paper Presented at the Third* Scientific Conference of the Psychology Department, College of Social Sciences, Kuwait University, Kuwait, 26-28 April.

Al-Ajmi, M. S. (2012). Emotional Intelligence and its relationship to anger and violence among student slow learners in general education schools in Kuwait. *Journal of Reading and Knowledge-Egypt*, 133, 304-364, (in Arabic).

Al-Barak, B. N. (2006). *The effect of a counseling* programme *on reducing parental stress among parents of children of the elementary state who suffer from learning disabilities*. (Unpublished PhD thesis), Amman Arab University For Graduate Studies, Jordan, (in Arabic).

Al-Beheiri, M. (2007). Emotional intelligence development to reduction some problems intensity for a sample of children with behavioural disorders. *DerasatNafseyah, 17* (3), 585-641.

Al-Mufti, B. A. (2002). Effectiveness of the proposed cooperative games in reducing aggressive behaviour in children pre-school. *Journal of Sports Education- Baghdad, 11*(4), 131-154, (in Arabic).

Al-Muoty, M. (2010). *Effectiveness training* programme *for some emotional skills in decreasing classroom problems for low academic achievers*. (Unpublished PhD thesis), Cairo University, Egypt, (in Arabic).

Al-Zait, N.M. (2006). *Emotional intelligence development by using play activities and its effects on reducing behavioural disorders of kindergarten children*. (Unpublished PhD thesis), Cairo University, Egypt.

Bar-On, R. (1997). *The Emotional Quotient Inventory (EQ-i): Technical manual.* Toronto, Canada: Multi-Health Systems.

Bar-On, R. (2000). Emotional and social intelligence: Insights from the Emotional Quotient Inventory (EQ-i). In R. Bar-On and J. D.A. Parker (Eds.), *Handbook of emotional intelligence: Theory, development, assessment and application at home, school and in the workplace,* (pp. 363-88). San Francisco: Jossey-Bass.

Bar-On, R. (2006). The Bar-On model of emotional-social intelligence (ESI). *Psicothema*, 18(suppl.), 13-25.

Bar-On, R., & Parker, J. D. A. (2000). *The Bar-On Emotional Quotient Inventory*: *Youth Version* (*EQ-i*:*YV*) *Technical Manual*. Toronto, Canada: Multi-Health Systems.

Chu, Y. (2005). *Celebrating self-actualization: Improving emotional intelligence through a cognitive-based English reading curriculum*. (Unpublished PhD thesis), University of Idaho.

Coombs, R. (2000). Violence in school: causation and prevention. Paper presented at the Annual Convention of the National Association of School Psychologists (32nd, New Orleans, LA, March 28-April 1).

Cooper, R. (1997). Applying emotional intelligence in the workplace. *Training and Development, 51*(12), 31-38.

Eichmann, K. (2009). *The effectiveness of training to improve the emotional intelligence of leaders.* (Unpublished PhD thesis), Faculty of TUI University.

Farraj, M. A. (2005). Emotional Intelligence and its relationship to anger and aggression among university students. *Journal of Arabic Studies in Psychology-Egypt, 4*(1), 93-151, (in Arabic).

Filella, G., Soldevila, A., Cabello, E., Franco, L., Morell, A., & Farre, N. (2008). Design, application and evaluation of an emotional education program at a penitentiary. *Electronic Journal of Research in Educational Psychology*,15, 383-400.

Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books.

Henley, M., & Long, N. J. (1999). Teaching emotional intelligence to impulsive-aggressive youth. *Reclaiming Children and Youth: Journal of Emotional and Behavioral Problems, 7*(4), 224-29.

Jaeger, A.J. (2001). *Emotional intelligence, learning style, and academic performance of graduate students in professional school of public administration*. (Unpublished dissertation), New York University.

Kamour, M. T. (2007). *Constructing a counseling program based on Goleman's theory of emotional intelligence and measuring its effects on reducing aggressive behaviors and negative attitudes of primary stage students towards school in Jordan*. Unpublished PhD thesis, Amman Arab University, Jordan.

Kazem, A.M., Al-Zubaidi, A.S., Alkharusi, H.A., Yousif, Y.H., Alsarmi, A.M., Al-Bulushi, S.S., Al-Jamali, F.A., Al-Mashhdany, S., Al-Busaidi, O.B., Al-Fori, S.M. Al-Bahrani, W.A., and Alshammary, B.M. (2009). A Normative study of the Raven Coloured Progressive Matrices Test for Omani children aged 5 through 11 years. *Malaysian Journal of Education, 34* (1), 37-51.

Landau, J., & Meirovich, G. (2011). Development of students' emotional intelligence: participative classroom environments in higher education. *Academy of Educational Leadership Journal, 15*(3), 89-104.

Liau, A. K., Liau, A. W. L., Teoh, G. B. S., & Liau, M. T. L. (2003). The Case for Emotional Literacy: the influence of emotional intelligence on problem behaviours in Malaysian secondary school students. *Journal of Moral Education*, *32*(1), 51-66.

Mattar, G. (2004). *The impact of an educational* programme *based on the theory of emotional intelligence on the of this intelligence and the degree of aggressive among students in grades five and six*. (Unpublished PhD thesis), Faculty of Graduate Studies, University of Jordan, (in Arabic).

Mertler, C.A. & Charles, C.M. (2011). *Introduction to educational research (7th ed.)*. Boston: Pearson.

Miller Gouley, Shields, Dickstein, Seifer, Magee, & Fox, 2003;

Miller, A. L., Gouley, K. K., Shields, A., Dickstein, S., Seifer, R., Magee, K. D., & Fox, C. (2003). Brief functional screening for transition difficulties prior to enrolment predicts socio-emotional competence and school adjustment in head start preschoolers. *Early Child Development and Care, 173*(6), 681-698.

Nord, C.W., Brimhall, D., & West, J. (1997). *Fathers' involvement in their children's schools*. Washington, DC. National Center for Educational Statistics, U. S. Department of Education Office of Educational Research and Improvement.

Omar, T.M. (2008). *The effectiveness of a counseling* programme *for developing emotional intelligence in reducing aggressiveness among hearing-impaired children*. (Unpublished PhD thesis), Cairo University, Egypt, (in Arabic).

Poulou, M. (2005). The prevention of emotional and behavioural difficulties in schools: Teachers' suggestions. *Educational Psychology in Practice, 21*(1), 37-52.

Raven, J.C., Court, J.H., & Raven, J. (1990). *Manual for Raven's progressive matrices and vocabulary scales: American and international norms*. Oxford, England: Oxford Psychological Press.

Raven, J.C., Court, J.H., & Raven, J. (2002). *Raven's colored progressive matrices*. Austria: Dr. G. SchuhfriedGes M. B. H.

Reissland, N. (2012). *The development of emotional intelligence: A case study*. Glasgow: Routledge.

Renwick, F. (2005). The 'A Quiet Place' programme: Short-term support for pupils with social, emotional, and behavioural difficulties in mainstream schools. *Educational and Child Psychology, 22*(3), 78-88.

Romasz, T.E. (2003). *Teaching Social and Emotional Learning Through Literature: The Development and Pilot Implementation of a Tertiary Prevention Group Counseling Curriculum for Use with Young Urban Elementary Students Demonstrating Disruptive Classroom Behaviours*. (Unpublished PhD thesis), The State University of New Jersey.

Ulutas, I., & Ömerong, E. (2007). The effect of an emotional intelligence education program on the emotional intelligence of children. *Social Behavior and Personality, 35*(10), 1365-1372.

Veitch, B.L. (2011). *Developmental education and emotional intelligence in three rural east Texas community colleges.* (Unpublished PhD thesis), Faculty of the Graduate School of Texas A & M University- Commerce.

Zijlmans, L. J. M., Embregts, P J C M, Gerits, L., Bosman, A. M. T., & Derksen, J. J. L. (2011). Training emotional intelligence related to treatment skills of staff working with clients with intellectual disabilities and challenging behaviour. *Journal of Intellectual Disability Research, 55*(2), 219-230.

APPENDIX

Table 4: Means (M), and standard deviations (SD) according to group on EQ

Domains	Group	N	M	SD
Intrapersonal	Experimental	26	13.23	3.62
	Control	26	13.62	3.59
Interpersonal	Experimental	26	16.92	3.54
	Control	26	15.54	3.09
Stress Management	Experimental	26	11.85	2.75
	Control	26	12.73	3.94
Adaptability	Experimental	26	15.12	3.20
	Control	26	16.00	3.57
Total EQ	Experimental	26	57.12	7.87
	Control	26	57.88	8.42
Positive Impression	Experimental	26	17.42	3.18
	Control	26	16.77	3.68

Table 5: Result of one-way ANOVA on EQ according group

Source	Domains	SS	df	MS	F	Sig.	η^2_p
Treatment	Intrapersonal	1.92	1	1.92	0.15	0.70	0.00
	Interpersonal	24.92	1	24.92	2.26	0.14	0.04
	Stress Management	10.17	1	10.17	0.88	0.35	0.02
	Adaptability	10.17	1	10.17	0.89	0.35	0.02
	Total EQ	7.69	1	7.69	0.12	0.74	0.00
	Positive Impression	5.56	1	5.56	0.47	0.50	0.01
Error	Intrapersonal	648.77	50	12.98			
	Interpersonal	552.31	50	11.05			
	Stress Management	576.50	50	11.53			
	Adaptability	574.65	50	11.49			
	Total EQ	3317.31	50	66.35			
	Positive Impression	590.96	50	11.82			

Note: *SS= sum of squares, df= degree of freedom, MS= mean square, F= F-value,* η^2_p*= effect size.*

Table 6: Means (M), and standard deviations (SD) on OMBEP according to group

Domains	Group	N	M	SD
Social problems	Experimental	26	11.27	1.73
	Control	26	11.23	2.42
Attention problems	Experimental	26	13.92	3.24
	Control	26	13.65	2.65
Rebellious behaviour	Experimental	26	13.23	3.35
	Control	26	12.27	2.93
Aggression	Experimental	26	11.27	4.00
	Control	26	10.77	3.27
Anxiety	Experimental	26	13.04	3.19
	Control	26	12.69	3.85
Depression	Experimental	26	10.88	2.67
	Control	26	11.12	3.20
Behavioural Problems	Experimental	26	12.81	3.04
	Control	26	12.23	2.29
Emotional Problems	Experimental	26	11.73	2.11
	Control	26	11.68	2.59
Average Problems	Experimental	26	12.27	2.37
	Control	26	11.96	2.10

Table 7: Result of one-way ANOVA on OMBEP according group

Source	Domains	SS	df	MS	F	Sig.	η^2_p
Treatment	Social problems	0.02	1	0.02	0.00	0.95	0.00
	Attention problems	0.94	1	0.94	0.11	0.74	0.00
	Rebellious behaviour	12.02	1	12.02	1.21	0.28	0.02
	Aggression	3.25	1	3.25	0.24	0.62	0.01
	Anxiety	1.56	1	1.56	0.13	0.73	0.00
	Depression	0.69	1	0.69	0.08	0.78	0.00
	Behavioural Problems	4.33	1	4.33	0.60	0.44	0.01
	Emotional Problems	0.03	1	0.03	0.01	0.94	0.00
	Average Problems	1.28	1	1.28	0.26	0.62	0.01
Error	Social problems	221.73	50	4.44			
	Attention problems	437.73	50	8.76			
	Rebellious behaviour	495.73	50	9.92			
	Aggression	665.73	50	13.32			
	Anxiety	624.50	50	12.49			
	Behavioural Problems	435.31	50	8.71			
	Emotional Problems	363.10	50	7.26			
	Average Problems	278.11	50	5.56			

Table 8: Means (M), standard deviations (SD), and t-test result of IQ

Group	N	M	SD	T value	Sig
Experimental	26	21.62	8.52	1.53	0.13
Control	26	24.54	4.73		

Table 9: Mean (M), and standard deviation (SD) on EQ according group

Domains	Group	N	M	SD
Intrapersonal	Experimental	26	13.85	2.344
	Control	26	12.38	2.654
Interpersonal	Experimental	26	18.00	2.040
	Control	26	15.15	3.461
Stress Management	Experimental	26	12.23	3.166
	Control	26	13.38	4.070
Adaptability	Experimental	26	17.73	2.325
	Control	26	15.77	3.525
Total EQ	Experimental	26	61.81	5.579
	Control	26	56.69	7.254
Positive Impression	Experimental	26	16.35	3.174
	Control	26	15.31	4.203

Table 10: Result of one-way ANOVA on EQ according IQ and group

Source	Domains	SS	df	MS	F	Sig.	η^2_p
IQ	Intrapersonal	0.07	1	0.07	0.01	0.92	0.00
	Interpersonal	0.54	1	0.54	0.07	0.80	0.00
	Stress Management	8.99	1	8.99	0.67	0.42	0.01
	Adaptability	3.53	1	3.53	0.39	0.53	0.01
	Total EQ	0.01	1	0.01	0.00	0.99	0.00
	Positive Impression	3.33	1	3.33	0.24	0.63	0.01
Group	Intrapersonal	27.12	1	27.12	4.24*	0.05	0.08
	Interpersonal	103.74	1	103.74	12.62*	0.00	0.21
	Stress Management	22.09	1	22.09	1.65	0.21	0.03
	Adaptability	53.44	1	53.44	5.92*	0.02	0.11
	Total EQ	324.08	1	324.08	7.59*	0.01	0.13
	Positive Impression	10.72	1	10.72	0.76	0.39	0.02
Error	Intrapersonal	313.47	49	6.40			
	Interpersonal	402.84	49	8.22			
	Stress Management	655.78	49	13.38			
	Adaptability	442.20	49	9.02			
	Total EQ	2093.56	49	42.73			
	Positive Impression	690.10	49	14.08			

** Significant at the level of ≤ 0.01.*

Table 11: Mean (M), and standard deviation (SD) according group on OMBEP

Domains	Group	N	M	SD
Social problems	Experimental	26	10.38	1.17
	Control	26	11.35	1.98
Attention problems	Experimental	26	12.38	2.52
	Control	26	14.31	2.74
Rebellious behaviour	Experimental	26	11.69	2.28
	Control	26	13.08	2.43
Aggression	Experimental	26	9.88	1.63
	Control	26	11.08	2.68
Anxiety	Experimental	26	12.35	2.48
	Control	26	12.62	2.83
Depression	Experimental	26	10.42	2.28
	Control	26	10.65	3.02
Behavioural Problems	Experimental	26	11.32	1.76
	Control	26	12.82	2.02
Emotional Problems	Experimental	26	11.05	1.22
	Control	26	11.54	1.90
Average Problems	Experimental	26	11.19	1.27
	Control	26	12.18	1.81

Table 12: Result of one-way ANOVA on OMBEP according IQ and treatment group

Source	Domains	SS	df	MS	F	Sig.	η^2_p
IQ	Social problems	0.74	1	0.74	0.28	0.60	0.01
	Attention problems	4.96	1	4.96	0.71	0.40	0.01
	Rebellious behaviour	22.66	1	22.66	4.36	0.04	0.08
	Aggression	14.08	1	14.08	2.97	0.09	0.06
	Anxiety	4.66	1	4.66	0.65	0.42	0.01
	Depression	0.03	1	0.03	0.01	0.95	0.00
	Behavioural Problems	4.39	1	4.39	1.23	0.27	0.03
	Emotional Problems	1.14	1	1.14	0.44	0.51	0.01
	Average Problems	0.26	1	0.26	0.11	0.75	0.00
Treatment	Social problems	12.75	1	12.75	4.76*	0.03	0.09
	Attention problems	52.53	1	52.53	7.55*	0.01	0.13
	Rebellious behaviour	15.00	1	15.00	2.89	0.10	0.06
	Aggression	11.62	1	11.62	2.45	0.12	0.05
	Anxiety	1.98	1	1.98	0.28	0.60	0.01
	Depression	0.73	1	0.73	0.10	0.75	0.00
	Behavioural Problems	23.45	1	23.45	6.59*	0.01	0.12
	Emotional Problems	3.77	1	3.77	1.45	0.23	0.03
	Average Problems	11.51	1	11.51	4.63*	0.04	0.09
Error	Social problems	131.30	49	2.68			

	Attention problems	340.73	49	6.95
	Rebellious behaviour	254.73	49	5.20
	Aggression	232.42	49	4.74
	Anxiety	349.38	49	7.13
	Behavioural Problems	358.20	49	7.31
	Emotional Problems	174.44	49	3.56
	Average Problems	127.25	49	2.60

** Significant at the level of ≤ 0.05.*

Table 13: Mean (M), and standard deviation (SD) according group on EQ

Domains	Group	N	M	SD
Intrapersonal	Experimental	26	15.88	2.34
	Control	26	13.27	2.72
Interpersonal	Experimental	26	19.27	1.97
	Control	26	15.92	3.50
Stress Management	Experimental	26	16.19	2.38
	Control	26	11.88	3.76
Adaptability	Experimental	26	19.69	2.62
	Control	26	15.08	3.42
Total EQ	Experimental	26	71.04	5.39
	Control	26	56.15	6.46
Positive Impression	Experimental	26	20.08	2.61
	Control	26	18.19	3.14

Table 14: Result of one-way ANOVA on EQ according to IQ and group

Source	Domains	SS	df	MS	F	Sig.	η^2_p
IQ	Intrapersonal	2.64	1	2.64	0.41	0.53	0.01
	Interpersonal	0.07	1	0.07	0.01	0.93	0.00
	Stress Management	0.00	1	0.00	0.00	1.00	0.00
	Adaptability	12.16	1	12.16	1.32	0.26	0.03
	Total EQ	28.76	1	28.76	0.81	0.37	0.02
	Positive Impression	2.00	1	2.00	0.24	0.63	0.01
Group	Intrapersonal	91.39	1	91.39	14.03*	0.00	0.22
	Interpersonal	140.36	1	140.36	17.07*	0.00	0.26
	Stress Management	230.38	1	230.38	22.82*	0.00	0.32
	Adaptability	289.07	1	289.07	31.39*	0.00	0.39
	Total EQ	2871.63	1	2871.63	80.79*	0.00	0.62
	Positive Impression	40.22	1	40.22	4.76*	0.03	0.09
Error	Intrapersonal	319.13	49	6.51			
	Interpersonal	402.89	49	8.22			
	Stress Management	494.69	49	10.10			
	Adaptability	451.23	49	9.21			
	Total EQ	1741.58	49	35.54			
	Positive Impression	413.88	49	8.45			

** Significant at the level of ≤ 0.05.*

Table 15: Mean (M), and standard deviation (SD) according group OMBEP

Domains	Group	N	M	SD
Social problems	Experimental	26	9.15	0.93
	Control	26	11.19	2.23
Attention problems	Experimental	26	11.00	2.25
	Control	26	14.58	3.01
Rebellious behaviour	Experimental	26	10.35	1.81
	Control	26	12.54	2.72
Aggression	Experimental	26	9.15	1.22
	Control	26	11.35	2.70
Anxiety	Experimental	26	10.31	1.44
	Control	26	12.65	3.14
Depression	Experimental	26	8.88	1.45
	Control	26	10.50	2.50
Behavioural Problems	Experimental	26	10.17	1.35
	Control	26	12.82	2.21
Emotional Problems	Experimental	26	9.45	0.70
	Control	26	11.45	2.17

Average Problems	Experimental	26	9.81	0.91
	Control	26	12.13	1.86

Table 16: Result of one-way ANOVA on OMBEP according IQ and group

Source	Domains	SS	df	MS	F	Sig.	η^2_p
IQ	Social problems	2.57	1	2.57	0.88	0.35	0.02
	Attention problems	4.48	1	4.48	0.63	0.43	0.01
	Rebellious behaviour	13.04	1	13.04	2.52	0.12	0.05
	Aggression	0.36	1	0.36	0.08	0.78	0.00
	Anxiety	2.13	1	2.13	0.35	0.56	0.01
	Depression	0.55	1	0.55	0.13	0.72	0.00
	Behavioural Problems	0.09	1	0.09	0.03	0.87	0.00
	Emotional Problems	1.61	1	1.61	0.61	0.44	0.01
	Average Problems	0.24	1	0.24	0.11	0.74	0.00
Treatment	Social problems	56.59	1	56.59	19.41*	0.01	0.28
	Attention problems	170.37	1	170.37	24.00*	0.01	0.33
	Rebellious behaviour	48.47	1	48.47	9.38*	0.01	0.16
	Aggression	61.67	1	61.67	13.80*	0.01	0.22
	Anxiety	73.56	1	73.56	12.21*	0.01	0.20
	Depression	34.22	1	34.22	8.04*	0.01	0.14
	Behavioural Problems	86.29	1	86.29	25.17*	0.01	0.34
	Emotional Problems	53.53	1	53.53	20.40*	0.01	0.29
	Average Problems	68.94	1	68.94	31.66*	0.01	0.39
Error	Social problems	142.85	49	2.92			
	Attention problems	347.87	49	7.10			
	Rebellious behaviour	253.30	49	5.17			
	Aggression	218.91	49	4.47			
	Anxiety	295.29	49	6.03			
	Behavioural Problems	208.60	49	4.26			
	Emotional Problems	168.02	49	3.43			
	Average Problems	128.59	49	2.62			

** Significant at the level of ≤ 0.05.*

Table 17: Mean (M), and standard deviation (SD) on EQ according tests (n=26)

Domains		Pre test	Post test	Follow test
Intrapersonal	M	13.23	13.85	15.88
	SD	3.615	2.344	2.338
Interpersonal	M	16.92	18.00	19.27
	SD	3.543	2.040	1.971
Stress Management	M	11.85	12.23	16.19
	SD	2.752	3.166	2.384
Adaptability	M	15.12	17.73	19.69
	SD	3.204	2.325	2.619
Total EQ	M	57.12	61.81	71.04
	SD	7.866	5.579	5.392
Positive Impression	M	17.42	16.35	20.08
	SD	3.177	3.174	2.607

Table 18: Result of repeated measures MANOVA on EQ according tests

Source	Domains	SS	df	MS	F	Sig.	η^2_p
Test	Intrapersonal	100.33	2	50.17	9.10*	0.01	0.27
	Interpersonal	71.72	2	35.86	9.91*	0.01	0.28
	Stress Management	301.00	2	150.50	31.05*	0.01	0.55
	Adaptability	274.18	2	137.09	23.76*	0.01	0.49
	Total EQ	2609.33	2	1304.67	61.66*	0.01	0.71
	Positive Impression	191.72	2	95.86	20.69*	0.01	0.45
Error	Intrapersonal	275.67	50	5.51			
	Interpersonal	180.95	50	3.62			
	Stress Management	242.33	50	4.85			
	Adaptability	288.49	50	5.77			
	Total EQ	1058.00	50	21.16			
	Positive Impression	231.62	50	4.63			

** Significant at the level of ≤ 0.05.*

Table 19: Multiple comparisons (Bonferroni) between three tests on EQ

Domains	(I) test	(J) test	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for difference	
						Upper	Lower
Intrapersonal	pre	post	-.62	0.75	1.00	-2.54	1.31
	pre	follow	-2.65*	0.75	0.01	-4.58	-0.73
	post	follow	-2.04*	0.38	0.01	-3.02	-1.06
Interpersonal	pre	post	-1.08	0.50	0.12	-2.35	0.20
	pre	follow	-2.35*	0.69	0.01	-4.12	-0.57
	post	follow	-1.27*	0.34	0.01	-2.13	-0.41
Stress Management	pre	post	-.39	0.78	1.00	-2.38	1.61
	pre	follow	-4.35*	0.58	0.01	-5.85	-2.85
	post	follow	-3.96*	0.41	0.01	-5.02	-2.90
Adaptability	pre	post	-2.62*	0.72	0.01	-4.46	-0.78
	pre	follow	-4.58*	0.78	0.01	-6.57	-2.58
	post	follow	-1.96*	0.46	0.01	-3.15	-0.78
Total EQ	pre	post	-4.69*	1.47	0.01	-8.46	-0.92
	pre	follow	-13.92*	1.42	0.01	-17.56	-10.29
	post	follow	-9.23*	0.85	0.01	-11.40	-7.06
Positive Impression	pre	post	1.08	0.75	0.49	-0.85	3.01
	pre	follow	-2.65*	0.43	0.01	-3.75	-1.56
	post	follow	-3.73*	0.57	0.01	-5.19	-2.28

** the mean difference is significant at the .05 level.*

Table 20: Mean (M), and standard deviation (SD) on OMBEP according tests (n=26)

Domains		Pre test	Post test	Follow test
Social problems	M	11.27	10.38	9.15
	SD	1.733	1.169	0.93
Attention problems	M	13.92	12.38	11.00
	SD	3.236	2.515	2.25
Rebellious behaviour	M	13.23	11.69	10.35
	SD	3.350	2.276	1.81
Aggression	M	11.27	9.88	9.15
	SD	3.996	1.633	1.22
Anxiety	M	13.04	12.35	10.31
	SD	3.194	2.481	1.44
Depression	M	10.88	10.42	8.80
	SD	2.673	2.283	1.45
Behavioural Problems	M	12.81	11.32	10.17
	SD	3.044	1.755	1.35
Emotional Problems	M	11.73	11.05	9.45
	SD	2.108	1.221	0.70
Average Problems	M	12.27	11.19	9.81
	SD	2.366	1.269	0.91

Table 21: Result of repeated measures MANOVA on OMBEP according tests

Source	Domains	SS	Df	MS	F	Sig.	η^2_p
Test	Social problems	58.69	2	29.35	37.97*	0.01	0.60
	Attention problems	111.18	2	55.59	25.86*	0.01	0.51
	Rebellious behaviour	108.33	2	54.17	20.16*	0.01	0.45
	Aggression	60.03	2	30.01	6.97*	0.01	0.22
	Anxiety	104.80	2	52.40	20.28*	0.01	0.45
	Depression	57.03	2	28.51	6.00*	0.01	0.19
	Behavioural Problems	91.16	2	45.58	25.40*	0.01	0.50
	Emotional Problems	71.39	2	35.70	24.41*	0.01	0.49
	Average Problems	79.15	2	39.57	31.31*	0.01	0.56
Error	Social problems	38.64	50	0.77			
	Attention problems	107.49	50	2.15			
	Rebellious behaviour	134.33	50	2.69			
	Aggression	215.31	50	4.31			
	Anxiety	129.21	50	2.58			
	Behavioural Problems	237.64	50	4.75			
	Emotional Problems	89.73	50	1.80			

Average Problems	73.13	50	1.46

** Significant at the level of ≤ 0.05.*

Table 22: Multiple comparisons (Bonferroni) between three tests on OMBEP

Domains	(I) test	(J) test	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for difference	
						Upper	Lower
Social problems	1	2	0.89*	0.27	0.01	0.20	1.57
	1	3	2.12*	0.30	0.00	1.36	2.87
	2	3	1.23*	0.14	0.00	0.87	1.59
Attention problems	1	2	1.54*	0.39	0.00	0.55	2.53
	1	3	2.92*	0.52	0.00	1.60	4.25
	2	3	1.39*	0.28	0.00	0.66	2.11
Rebellious behaviour	1	2	1.54*	0.44	0.01	0.42	2.66
	1	3	2.89*	0.56	0.00	1.44	4.33
	2	3	1.35*	0.33	0.00	0.49	2.20
Aggression	1	2	1.39	0.61	0.09	-0.17	2.94
	1	3	2.12*	0.75	0.03	0.19	4.04
	2	3	0.73*	0.26	0.03	0.07	1.39
Anxiety	1	2	0.69	0.41	0.31	-0.36	1.75
	1	3	2.73*	0.50	0.00	1.46	4.00
	2	3	2.04*	0.43	0.00	0.94	3.14
Depression	1	2	0.46	0.73	1.00	-1.40	2.32
	1	3	2.00*	0.60	0.01	0.46	3.54
	2	3	1.54*	0.46	0.01	0.36	2.71
Behavioural Problems	1	2	1.49*	0.36	0.00	0.56	2.42
	1	3	2.64*	0.48	0.00	1.40	3.88
	2	3	1.15*	0.22	0.00	0.58	1.73
Emotional Problems	1	2	0.68	0.39	0.27	-0.31	1.67
	1	3	2.28*	0.38	0.00	1.31	3.25
	2	3	1.60*	0.22	0.00	1.05	2.16
Average Problems	1	2	1.08*	0.32	0.01	0.25	1.91
	1	3	2.46*	0.39	0.00	1.47	3.45
	2	3	1.38*	0.20	0.00	0.88	1.88

** the mean difference is significant at the .05 level.*

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