

Research Paper

The Effect of Emotional Intelligence Training (EIT) on the Social Competence in Adolescents with Attention Deficit Hyperactivity Disorder (ADHD)

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ABSTRACT

Perceived social competence is one of the effective factors in improvement of self-esteem and self-efficacy in the adolescents affected by psychological disorders. The present study aims to investigate the effect of Emotional Intelligence Training (EIT) on social competence (SC) in the adolescents affected by attention deficit hyperactivity disorder (ADHD). This study is a quasi-experimental research with pretest-posttest design and control group. The population includes all the adolescents of 13-17 years who have referred to psychological treatment centers. The samples were selected by convenience sampling and one of the treatment centers was chosen to perform the study. Among the 135 adolescents receiving the ADHD diagnosis, 40 adolescents were assigned to two 20-people groups including the experimental and control groups by simple random sampling. Finally, the subjects of the experimental group received EIT for eight 45-min sessions. Data collection was done by Social Competence Questionnaire (SCQ, Prandin; 2006) that was filled by the subjects. The collected data was analyzed by SPSS-23. According to the findings, EIT has improved the components of social competence in the adolescents affected by ADHD ($P < 0.01$). The findings suggest that EIT provides the capacity of recognizing one's own and others' emotions and how to regulate and express them. So, it can be effective in social competence of the adolescents affected by ADHD.

Keywords: Attention Deficit Hyperactivity Disorder, Social Competence, Emotional Intelligence

Adolescence is a critical period of life with rapid physical and mental transformations. Social adjustment and social competence are the results of a healthy personality in this period (Armum & Chellappan, 2016). In this regard, the adolescents affected by disorders such as ADHD are denied by their friends and they are not allowed to attend the social groups (Gholipour, Livarjani & Hoseyninasab, 2019). Perceived social competence in adolescence leads to normal growth of the personality of ADHD patients and their improved

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performance. *Flener et al* have defined social competence based on cognitive, behavioral, emotional, and motivational skills (Ashoori, Pourmohamadreza-Tajrishi, Jalil-Abkenar et al., 2017). In fact, social competence is defined as the individuals' ability to behave in an adjusted manner proportional to their age and cognitive capacity.

Social competence is the basis of positive consequences such as self-confidence, responsibility, the quality of friendly relationships, intimacy, and social welfare in ADHD adolescents (Nixon, 2001). Accordingly, poor social competence plays a significant role in pathology of the adolescents' disorders and it makes them vulnerable to the internal and external pressures. Also, it is the origin of most of the social and psychological problems in the adolescents affected by ADHD (Ros & Graziano, 2018).

Studies have shown that poor social competence is expressed by the adolescents' behavioral problems⁶. (Kim, Guo & Koh et al., 2010). Accordingly, it can be stated that social competence enables the adolescents to choose proper behaviors in different situations and it provides them with a sense of value and the opportunity of active participation in the society (Westling, Andrews, Peterson, 2012). This issue is more critical about the adolescents affected by some disabilities (De Boo & Prins, 2007; De la Barrera, Schoeps, Gil-Gómez et al., 2019). Another study showed that social competence is an inhibitor of the adolescents' attitude toward their deviant peers and it has a significant role in their academic success (Stepp, Pardini, Loeber et al., 2011). Another study showed that the parents' efficient role and their effective relationships help the growth of the adolescents' social competence (Agarwal & Agarwal, 2018).

As already mentioned, social competence includes a set of skills that play a significant role in the adolescents' adjustment. It can be inferred that skills can be learned and promoted by training. Emotional intelligence training (EIT) is an intervention that can be effective in social competence due to the inclusion of emotional, social, and behavioral capacities (Moreno-Manso, García-Baamonde, Guerrero-Barona et al., 2016). Study of the previous studies suggests that low emotional intelligence is related to increased severity of the symptoms in ADHD adolescents and it is an effective factor in their inefficient coping with stressors (Kaypakl & Tamam, 2019). Emotional intelligence includes a set of skills, talents, and non-cognitive abilities that promote the person's success in coping with stressful conditions (Mayer, Caruso & Salovey, 2016). Bradberry and Greaves consider emotional intelligence including several skills such as self-awareness, self-management, awareness of other people's emotions, and management of the relationships (Bradberry & Greaves, 2009; Bar-On, Tranel, Denburg et al., 2003). According to a study, emotional intelligence is related to increased psychological flexibility and improved performance of ADHD adolescents (Yazdi, Farahi, Farahi & Hosseini, 2017). Another study showed that emotional intelligence can lead to the improvement of interpersonal relationships, empathy, respecting others, stress management, and promotion of creativity in the adolescents (Bhan S, Farooqui, 2013). Also, it has been reported that EIT can balance social competence and emotional regulation in bullying adolescents (Soliemani, Sheikholeslami & Mousavi, 2017). According to the previous studies, EIT is so effective in the adolescents' adjustment and their normal growth.

Regarding the significant role of emotional intelligence in ADHD adolescents, these people have little emotional growth. Studies have shown that these people express a limited capacity of recognizing emotions and expressing them (Okano, Jeon, Crandall et al., 2019;

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Musser, Galloway-Long, Frick & Nigg, 2013). Accordingly, this study aims to investigate the effect of EIT on perceived social competence in ADHD adolescents.

METHODOLOGY

Sample

This study is a quasi-experimental research with pretest-posttest design and control group. The population includes all the adolescents of 13-17 years in Afghanistan who have referred to psychological treatment centers. The samples were selected by convenience sampling and one of the treatment centers was chosen to perform the study. The adolescents receiving the ADHD diagnosis based on DSM-5 criteria and passing their treatment procedures were selected for this study. In fact, none of the subjects had any severe clinical symptoms and they received routine care. Among the 135 adolescents receiving the ADHD diagnosis, 40 adolescents were assigned to two 20-people groups including the experimental and control groups by simple random sampling. Social competence questionnaire was filled by the 135 adolescents with ADHD. Finally, 120 subjects received a medium and below-medium score. The inclusion criteria included having passed the acute phase of the disease, the parents' satisfaction, and the adolescents' willingness to participate in training sessions. Based on the mentioned criteria, 40 people were selected and randomly assigned to the experimental (20 people) and control (20 people) groups. The experimental group received eight 45-min EIT sessions over four weeks. Finally, posttest was done in both groups.

Instruments

- **Social Competence Questionnaire (SCQ, Prandin; 2006):** It has been designed for the adolescents and it includes 47 items scored based on a 7-point Likert scale. The choices include the following: quite disagree (1), disagree (2), almost disagree (3), no idea (4), almost agree (5), agree (6), and quite agree (7). This questionnaire consists of four components designed based on the social competence model *Flener et al.* The validity of this test was studied by exploratory factor analysis and it was found that the four components can significantly explain 0.83 of the variance of the whole questionnaire. The reliability of this test was obtained 0.89 by test-retest after a month and 0.88 by Cronbach's alpha (Bayrami, Hashemi Nosratabad, Badri Gargari & Dabiri, 2016).
- **Educational intervention:** The EIT intervention was derived from the program proposed by Greaves and Bradberry (Nooreddini, Sanagoo & Kalteh, 2019), that is based on the training of the four components of emotional intelligence (self-awareness, self-management, awareness of the other people's emotions, and management of the relationships). The eight sessions of training the mentioned components were held by a psychologist.

RESULTS

This research was done on 40 adolescents with ADHD. The subjects were assigned to the experimental (20 people) and the control (20 people) groups. Each group included 15 boys and 5 girls. The average age was 15.78 in the experimental group and 15.42 in the control group. The members of the experimental group received had received ADHD treatment in the average age of 7.12 and the members of the control group had received the treatment in the average age of 6.73.

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Table1: Mean, SD, and the results of Shapiro-Wilk test in terms of the group and the evaluation stages

| Variable | | Experimental group (20 participants) | | | | Control group (20 participants) | | | |
|----------|-----------|--------------------------------------|------|-------|-------|---------------------------------|------|-------|-------|
| | | M | SD | z | P | M | SD | z | P |
| BS | Pre-test | 125.65 | 2.92 | 0.945 | 0.293 | 126.45 | 2.60 | 0.981 | 0.945 |
| | Post-test | 136.15 | 3.00 | 0.879 | 0.017 | 128.90 | 3.23 | 0.802 | 0.001 |
| MS | Pre-test | 27.05 | 1.48 | 0.962 | 0.592 | 25.65 | 1.38 | 0.925 | 0.122 |
| | Post-test | 30.70 | 2.92 | 0.921 | 0.105 | 26.10 | 1.94 | 0.931 | 0.163 |
| CS | Pre-test | 12.20 | 1.55 | 0.934 | 0.184 | 12.35 | 1.43 | 0.945 | 0.299 |
| | Post-test | 19.45 | 2.08 | 0.955 | 0.450 | 14.05 | 2.13 | 0.933 | 0.179 |
| ES | Pre-test | 11.30 | 1.71 | 0.953 | 0.421 | 11.70 | 1.52 | 0.928 | 0.142 |
| | Post-test | 15.15 | 3.82 | 0.822 | 0.002 | 12.00 | 3.52 | 0.942 | 0.262 |

Notes: M=Mean, SD= Standard Deviation, BS=Behavioral Skills, MS=Motivational Skills, S=Cognitive Skills & ES=Emotional Skills.

As seen in Table 1, the posttest scores of the dependent variables (the components of social competence) were significantly different from the pretest scores. The result of Shapiro-Wilk test is more than 0.05 for all the variables except some of them. So, the assumption of normality of the variables is approved.

The effectiveness of the EIT program in the adolescent's social competence was studied by multivariate analysis of covariance (ANCOVA). The use of ANCOVA requires the normality of the data and observance of the equivalence of variances, homogeneity of covariance, and homogeneity of regression slope. Equivalence of variances was studied by Levene's test and its results for behavioral skills ($F=1.363$, $Sig=0.252$), motivational skills ($F=1.152$, $Sig=0.294$), cognitive skills ($F=1.120$, $Sig=0.297$), and emotional skills ($F=0.004$, $Sig=0.947$) ($P > 0.05$). The results of Box test approve the equivalence of covariance ($M=17.916$, $F=1.586$, $Sig=0.104$). Furthermore, the regression slope of behavioral skills ($F=1.197$, $Sig=0.317$), motivational skills ($F=0.524$, $Sig=0.524$), cognitive skills ($F=0.152$, $Sig=0.859$), and emotional skills ($F=2.606$, $Sig=0.092$) approve this assumption ($P > 0.05$). Tables 2 and 3 present the results of multivariate ANCOVA for the posttest.

Table 2: The results of Wilks' Lambda for multivariate ANOVA for the subscales of social competence

| Effect | Value | F | Hypothesis df | Error df | Sig. | Eta | Observed Power |
|----------------|-------|--------|---------------|----------|-------|-------|----------------|
| Pillai's Trace | 0.105 | 65.754 | 4.000 | 31.000 | 0.001 | 0.895 | 1.00 |

As seen in Table 2, the results of Wilks' Lambda indicate that EIT has been significantly effective in the posttest results of the dependent variables. To specify the components that have been significantly influenced by EIT, the posttest scores of social competence components were compared in the experimental and control groups. According to Table 3, EIT has had a significant effect on all the components of social competence ($P \leq 0.05$).

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Table 3: The results of multivariate ANCOVA for the posttest scores of social competence components in the experimental and control groups

| Dependent Variable | Groups | Mean | Mean Difference | Std. Error | F | Sig. | Eta | Observed Power |
|--------------------|--------|--------|-----------------|------------|--------|-------|-------|----------------|
| BS | CG | 127.23 | -10.60 | 3.58 | 8.761 | 0.006 | 0.205 | 0.820 |
| | EG | 137.82 | | | | | | |
| MS | CG | 26.19 | -4.42 | 1.00 | 19.399 | 0.000 | 0.363 | 0.990 |
| | EG | 30.61 | | | | | | |
| CS | CG | 14.02 | -5.46 | 0.81 | 46.057 | 0.000 | 0.575 | 1.00 |
| | EG | 19.48 | | | | | | |
| ES | CG | 11.23 | -4.69 | 1.31 | 12.736 | 0.001 | 0.273 | 0.934 |
| | EG | 15.92 | | | | | | |

Notes: BS=Behavioral Skills, MS=Motivational Skills, S=Cognitive Skills & ES=Emotional Skills, CG=Control Group & EG=Experimental Group.

As seen in Table 3, the significance level of the independent variable (group) is less than 0.05 for all the social competence components. It suggests that there is a significant relationship between the experimental and control groups in terms of the posttest scores of social competence components ($P < 0.05$), so that the modified mean of the posttest scores of social competence components in the experimental group is higher than the control group. The statistical power of close to one suggests the high accuracy and adequacy of the sample to evaluate the research hypothesis. The mentioned findings indicate the positive effect of EIT on social competence components in ADHD adolescents.

DISCUSSION

The present research aimed to investigate the effect of EIT on the components of social competence in ADHD adolescents in Herat. The results showed that this intervention has significantly improved the components of social competence (behavioral skills, motivational skills, cognitive skills, and emotional skills) in ADHD adolescents. Regarding their similar findings, the previous studies have shown that EIT is effective in the adolescents' social competence (Moreno-Manso & García-Baamonde, 2016; Naeimavi, Maktabi & Omidian, 2017). Also, previous studies suggest that there is a significant relationship between emotional intelligence and perceived social competence (Lopes & Brackett, 2004). In the review of literature, no study was found to report different findings. In fact, the literature suggests that emotional intelligence is one of the effective factors in the adolescents' social competence. In this regard, several studies have mentioned social competence as the main indicator of emotional intelligence (Moreno-Manso & García-Baamonde, 2016).

The findings showed that EIT can lead to improvement of social skills and social competence in ADHD adolescents by promotion of their emotion regulation and coping strategies with stressful conditions. So, it is suggested to pay attention to emotion-based interventions and empowerment of these people. This research had some limitations including non-probability sampling, no follow up program, and the limited time of the training program. Meanwhile, it only investigated the ADHD adolescents in Herat. So, the results cannot be generalized to other adolescents. It is suggested to cover the mentioned limitations in future studies by performing complementary studies including cognitive and behavioral interventions. So, the results of such studies can be compared to the findings of the present study that is an emotion-based research. Also, it is suggested to include the EIT program as a life skill course provided for the children and adolescents affected by ADHD.

REFERENCES

- Aeimavi M, Maktabi GM, Omidian M. (2017). The effectiveness of emotional intelligence training on the components of bullying, social competence and emotional intelligence in male students of fourth grade (second period) in Shadegan city. *Journal of Fundamentals of Mental Health*; 2(19): 136-141.
- Agarwal, I. B., & Agarwal, P. C. (2018). Role of parents in the development of social competency among adolescents. *J Hum Beha Soc Envi*, 28(7), 829-39.
- Armum, P., & Chellappan, K. (2016). Social and emotional self-efficacy of adolescents: measured and analysed interdependencies within and across academic achievement level. *International Journal of Adolescence and Youth*, 21(3), 279-288.
- Ashoori, M., Pourmohamadreza-Tajrishi, M., Jalil-Abkenar, S. S., Fallah, A.M., Azimi Garoosi, S. (2017). Effectiveness of Mental Immunization Program Training on Social Competency and Personality Traits of Individuals with Cerebral Palsy. *Arch Rehab*, 18(2), 98-109.
- Bar-On, R., Tranel, D., Denburg, N. L., & Bechara, A. (2003). Exploring the neurological substrate of emotional and social intelligence. *Brain*, 126(8), 1790-1800.
- Bayrami, M., Hashemi Nosratabad, T., Badri Gargari, R., & Dabiri, S. (2016). The Effectiveness of Social Competence Training based on Felner Model on Social Adjustment of Students Being Bullying Victims, with Regards to the Type of Social Goal Orientation. *Clinical Psychology Studies*, 6(23), 1-24.
- Bhan, S., & Farooqui, Z. (2013). Social skills training of children with learning disability. *Disability, CBR & Inclusive Development*, 24(2), 54-63.
- Brackett, M. A., Rivers, S. E., & Salovey, P. (2011). Emotional intelligence: Implications for personal, social, academic, and workplace success. *Social and personality psychology compass*, 5(1), 88-103.
- Bradberry, T., & Greaves, J. (2009). *Emotional Intelligence 2.0*. TalentSmart.
- De Boo, G. M., & Prins, P. J. (2007). Social incompetence in children with ADHD: Possible moderators and mediators in social-skills training. *Clinical psychology review*, 27(1), 78-97.
- de la Barrera, U., Schoeps, K., Gil-Gómez, J. A., & Montoya-Castilla, I. (2019). Predicting adolescent adjustment and well-being: The interplay between socio-emotional and personal factors. *International journal of environmental research and public health*, 16(23), 4650.
- Gholipour, K. S., Livarjani, S., & Hoseyninasab, D. (2019). Effectiveness of Acceptance and Commitment Therapy on the Symptoms of Attention Deficit Hyperactivity Disorder (ADHD) and Academic Procrastination of Adolescents with ADHD. *Scientific Journal of Rehabilitation Medicine*, 8(2), 106-118.
- Kaypakl, G.Y, Tamam, L. (2019). Emotional Intelligence in Attention Deficit Hyperactivity Disorder. *Current Approaches in Psychiatry/Psikiyatride Guncel Yaklasimlar*, 11(5).
- Kim, E., Guo, Y., Koh, C., & Cain, K. C. (2010). Korean immigrant discipline and children's social competence and behavior problems. *Journal of pediatric nursing*, 25(6), 490-499.
- Mayer, J. D., Caruso, D. R., & Salovey, P. (2016). The ability model of emotional intelligence: Principles and updates. *Emotion review*, 8(4), 290-300.
- Moreno-Manso, J. M., García-Baamonde, M. E., Guerrero-Barona, E., Godoy-Merino, M. J., Blázquez-Alonso, M., & Gonzalez-Rico, P. (2016). Perceived emotional intelligence and social competence in neglected adolescents. *Journal of Youth Studies*, 19(6), 821-835.

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- Musser, ED, Galloway-Long, HS, Frick, PJ, Nigg, JT. (2013). Emotion regulation and heterogeneity in attention-deficit/hyperactivity disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52(2), 163-71.
- Nixon, E. (2001). The social competence of children with attention deficit hyperactivity disorder: A review of the literature. *Child Psychology and Psychiatry Review*, 6(4), 172-180.
- Nooreddini, A., Sanagoo, A., & Kalteh, E. A. (2019). The effect of Emotional Intelligence component education on nursing student happiness and academic achievement. *Journal of Nursing Education*, 8(5), 47-54.
- Okano, L., Jeon, L., Crandall, A., Powell, T., & Riley, A. (2019). Developmental cascades of social competence, achievement in school, and achievement on standardized assessments during the transition to adolescence and secondary school. *Journal of adolescence*, 74, 91-102.
- Ros, R., & Graziano, P. A. (2018). Social functioning in children with or at risk for attention deficit/hyperactivity disorder: A meta-analytic review. *Journal of Clinical Child & Adolescent Psychology*, 47(2), 213-235.
- Solilemani, E., Sheikholeslami, A., & Mousavi, M. (2016). The effectiveness of emotional intelligence training on social competence and emotional regulation in bullying students. *Educational Psychology*, 12(42), 103-128.
- Stepp, S. D., Pardini, D. A., Loeber, R., & Morris, N. A. (2011). The relation between adolescent social competence and young adult delinquency and educational attainment among at-risk youth: The mediating role of peer delinquency. *The Canadian Journal of Psychiatry*, 56(8), 457-465.
- Westling, E., Andrews, J. A., & Peterson, M. (2012). Gender differences in pubertal timing, social competence, and cigarette use: a test of the early maturation hypothesis. *Journal of Adolescent Health*, 51(2), 150-155.
- Yazdi, S. A. A., Farahi, S. M. M., Farahi, S. M. M. M., & Hosseini, J. (2018). Emotional intelligence and its role in cognitive flexibility of children with and without Attention Deficit Hyperactivity Disorder. *Anales De Psicología/Annals of Psychology*, 34(2), 299-304.

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Conflict of Interest

The author(s) declared no conflict of interest.

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