



Comparison of Alexithymia and Quality of Life in Gifted and Non-gifted High School Students

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Authors' contributions

This work was carried out in collaboration between both authors. Authors NMY designed the study and wrote the protocol. Author MF performed the statistical analysis, managed the literature search and wrote the first draft of the manuscript with assistance from author NMY. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/INDJ/2016/20318

Editor(s):

(1) Chung-Yao Hsu, Division of Epilepsy and Sleep Disorders, Department of Neurology, College of Medicine, Kaohsiung Medical University, Taiwan.

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Complete Peer review History: <http://sciencedomain.org/review-history/11574>

Original Research Article

Received 22nd July 2015
Accepted 5th September 2015
Published 27th September 2015

ABSTRACT

Aim: With respect to the fact that students will undertake management in various areas of community in future, it seems necessary to recognize the issues influencing their emotions and expression. Therefore, the purpose of the present study is to investigate alexithymia and quality of life in normal and gifted high school students in Babol city during 2013.

Study Design: A cross-sectional study was conducted on high school students.

Place and Duration of Study: Four high schools of Babol city, between February and June 2013.

Methodology: 300 students (150 gifted and 150 normal) were randomly selected from two normal schools, two non-profit making schools, two public exemplary schools, and two gifted schools (males and females) in all grade levels (from first to fourth class) of high school. Using Toronto Alexithymia Scale (TAS-20) and quality of life questionnaire-short form, the sample was evaluated. Finally, to analyze the required data, MANOVA test was used through SPSS software.

Results: As the research findings revealed, gifted students differ from normal students in some psychological components since gifted students have lower alexithymia compared to normal

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students. However, regarding quality of life, there is no significant difference between quality of life among gifted and normal males and females.

Conclusion: Gifted students have lower alexithymia compared to normal students.

Keywords: Alexithymia; quality of life; students; gifted students.

1. INTRODUCTION

Considering the fact that gifted individuals play the key role in comprehensive development of all countries and communities and on one hand, it is better to achieve development and further advancement who are healthy in terms of human and emotional aspects, the importance of recognizing gifted students, flourish their talents, identify and investigate their family and personality status are regarded as the affairs related to students. No matter gifted is an individual, what is important is that they have healthy characteristics and their intelligence help others to benefit in communities. Young students are future invested of each community. Their unique role in the trend of growth and development of countries is evident. Therefore, it is vital to invest on this group age of grow and flourish as a part of basic support [1].

Generally, changes of this period can cause specific problems. When adolescents cannot successfully overcome evolutionary problems, crises and challenges, they will experience psychological disorders. Accordingly, considerable disturbances will be manifested during their daily life and emotional-social-psychological aspects, leading to characteristic disorder [2].

Another problem regarding adolescents is the quality of their life. Simultaneously with various advancements in different dimensions and levels of life, the interest to measure quality of life has been increased [3].

The quality of life is a complex issue such that it is difficult to present a clear definition for this concept. Hence, according to WHO, the quality of life refers to the perception of individuals about their situation in life in terms of culture, value system in which they live, objectives and expectations, and talents and preferences. Accordingly, such a concept is totally individualistic and basing on the perception of individuals about their various life aspects [4].

On the other hand, inability to express emotions or alexithymia is another factor that students are

involved in and is not considered in educational aspects. For the first time, the concept of alexithymia was coined by Psychotherapist Peter Sifneos [5]. According to Sifneos [5,6] alexithymia is basically characterized by discretion and emotion expression disorder, very low of daydreaming, cognitive styles with external orientation and dependent to stimulus. Such individuals face problem in recognizing, revealing, processing, and organizing emotions as well as distinguishing internal emotions from physical emotions [7]. Given to cognitive and emotional defects, it is assumed that alexithymia can be related with some health indices such as depression, anxiety and anger in general and physical problems in particular [8].

Alexithymia is an emotional cognitive trait in which individuals are unable to regulate and understand their emotions [9]. Due to lack of emotional awareness and inability to cognitively process their emotions, these individuals are not usually able to identify, understand or describe their emotions and have a limited ability to adjust with stressful conditions. In fact, one of the most important skills required by each individual is awareness about internal emotions. These abilities can help individuals to know their abilities, weaknesses and other characteristics and enter into various stages of life with a deep awareness about himself/herself and other people [10]. Such an awareness about weaknesses causes that individuals to have more control over themselves. Emotional disturbance prevents learner to monitor learning process [11].

Individuals with alexithymia not only lack the capacity of using emotions to guide their behaviors but they are impatient against stresses and have little incompatible resources [12]. To explain this relation, psychological approaches can be firstly discussed. Based on psychological approaches, strong emotional damage in life and growing in an environment with weak emotional stimuli can cause alexithymia. Alexithymia (regardless of its root and cause) indicates a kind of defect in cognitive process and emotion regulation [13]. Every environmental disorder or

strong emotional damage can cause the incidence of alexithymia.

It can be stated that inability in expressing emotions among students makes the necessity of officials, planners and educational system authorities' critical attention to implement dominant strategies to decrease emotional disturbance and stipulate motivation.

More attention is needed in this issue and serious and professional treatment can be a step to solve learners educational problems of learners at different educational levels. Alexithymia is an emotional cognitive trait in which an individual is unable to regulate and understand his/her emotions [14]. School environment is an appropriate means to promote life skills and appropriate behavior, physical-mental and social health of students as well as their quality of life. Considering the differences of educational environment of gifted and normal schools, it seems that comparing these two groups can provide a great amount of information. Paradox results reported regarding the quality of life in the two groups of gifted and non-gifted students, lack of valid materials regarding alexithymia as well as the atmosphere governing family, and the behavior type of students studying in gifted schools caused that the present study attempts to compare alexithymia and quality of life in gifted and normal students.

2. MATERIALS AND METHODS

The present research was a case-control study. The statistical population included all gifted and normal students of Babol City. 300 people (150 gifted and 150 non-gifted students) are selected as the statistical sample using simple random sampling from two normal schools, two non-profit schools, two public exemplary schools, and two gifted schools (male and female) in all grade levels (from the first to fourth class) of high school.

To gather the required data, Toronto Alexithymia Scale (TAS-20) and quality of life questionnaire (short form) were used. TAS-20 proposed by Taylor et al. (1994) is a 20-item test measuring three subscales of difficulty in identifying emotions and distinguishing between emotions and physical health due to excitement, difficulty in describing emotions for others, and cognitive style with external orientation and stimulus-dependent (extrovert or concrete thinking) based

on Likert scale (1=disagree to 5=agree) [15]. The measured dimensions include difficulty identifying feeling (DIF), difficulty describing feeling (DDF) and externally oriented thinking (EOT). This questionnaire has been evaluated in Iran by Besharat (2007). In Persian version, Cronbach's alpha for total alexithymia and three subscales of DIF, DDF and EOT have been reported 82.85, 75.0, 0.0, and 0.72, respectively, indicating a good level of internal consistency. The test reliability is also reported 0.87. The validity of TAS was also evaluated based on the correlation between the subscales of this test and psychological-well being scale ($r = .78$ and $P < 0.001$) indicating that there is a significant correlation between psychological well-being and total alexithymia. The results of confirmatory factor analysis confirmed the existence of three subscales of alexithymia in Persian version [9].

In the present paper, World Health Organization Quality of Life BRIFE (WHOQOL-BREF) was used to measure the quality of the subjects' life. This questionnaire includes 26 items measuring the quality of life in general and in particular. The employed questionnaire has 2 questions generally evaluating health state and the quality of life and only total scores are considered. Notably, this questionnaire is known as WHQOL-100 containing 6 subscales and 24 dimensions. Due to high number of the questionnaire items and with respect to the fact that the respondents were students and they might leave some items unanswered, BREF type was selected including 26 items such that one question was selected out of the 24 items and two items were added regarding total quality and public health [15].

Scoring was based on Likert scale (from 1 to 5) and in negative items, scoring was reverse as well. After performing the necessary computations in each area, a score of 4-20 was obtained for each separated area in which 4 indicated the worst and 20 indicated the best quality of life in the respected area. The first item contains questions about the quality of life and the second item on health status. After recording, the responses of the questionnaire were separately computed in each area and then, a total score was obtained for each person which was comparable with each other.

The validity and reliability of the questionnaire was also evaluated by Nejat et al. [16]. The reliability in the areas of physical health, mental health, social relations, and environment health were reported 0.77, 0.77, 0.75, and 0.84,

respectively. In the results reported by the group constructed WHQOL questionnaire performed in 15 international centers of this organization, Cronbach's alpha has been reported 0.73-0.89 for four-fold subscales and total scale.

2.1 Statistical Analysis

The data were analyzed using MANOVA (Multivariate Analysis of Variance) test through SPSS software.

3. RESULTS

The first research hypothesis: "The amount of alexithymia is different between gifted and normal males and females. The mean age of the participants was 16.8 ± 1.7 years (range, 5-18). The mean of the educational levels of their fathers and mothers were 12.2 ± 4.6 , 11.1 ± 3.7 , respectively.

As the findings revealed, in between groups, based on gifted and non-gifted individuals, four-fold test of MANOVA related to 2 variables of the research, alexithymia indices are statistically significant. Also, F-value related to Wilks's statistic (11.872) has been significant at the significance level of 0.05. Additionally, regarding gender, F-value related to Wilks's statistic (14.057) has been significant at the significance

level of 0.05. To investigate that the significance resulted by which variables of alexithymia, MONOVA test results are presented in Table 2.

As shown in Table 2, the results related to alexithymia and its subscales in gifted and normal students have been significantly different ($P < 0.05$). Moreover, in the subscale of problem in identifying the problem of expressing emotion in male and female students, with respect to the fact that the test significance level is higher than 0.05, the hypothesis is not confirmed and in alexithymia and the subscale of externally thinking in male and female students, a significant difference has been obtained.

The second research hypothesis: the quality of life in gifted and normal male and female is different.

As the findings revealed, in between groups, based on gifted and non-gifted individuals and gender, four-fold test of MANOVA related to 4 variables of the research is not statistically significant. Also, F-value related to Wilks's statistic (1.585) has not been significant at the significance level of 0.05. However, to investigate the variables in details, based on normal and gifted males and females, MONOVA test results were applied (Table 4).

Table 1. Manoval test results for alexithymia

	Criterion statistic	Statistic value	F	Sig.
Group	Pillai's Trace	0.108	11.872	0/000
	Wilks's Lambada	0.892	11.872	0/000
	Hotelling's Trace	0.121	11.872	0/000
	Roy's Largest Root	0.121	11.872	0/000
Gender	Pillai's Trace	0.125	14.057	0/000
	Wilks's Lambada	0.875	14.057	0/000
	Hotelling's Trace	0.143	14.057	0/000
	Roy's Largest Root	0.143	14.057	0/000

Table 2. Monova test results for subscales of alexithymia

Resource	Dependent variable	Sum of squares	Degree of freedom	Mean of squares	F	Sig.
Group	Problem in identifying emotions	179.782	1	179.782	6.145	0.014
	Problem in expressing emotions	200.430	1	200.430	19.510	0.000
	Externally thinking	343.210	1	343.210	27.359	0.000
	Alexithymia	2124.430	1	2124.430	24.804	0.000
Gender	Problem in identifying emotions	11.409	1	11.409	0.390	0.533
	Problem in expressing emotions	22.830	1	22.830	2.222	0.137
	Externally thinking	520.970	1	520.970	41.529	0.000
	Alexithymia	959.790	1	959.790	11.206	0.001

Table 3. Manoval test results for the quality of life

	Criterion statistic	Statistic value	F	Sig.
Group	Pillai's Trace	0.021	1.585	0.178
	Wilks's Lambada	0.979	1.585	0.178
	Hotelling's Trace	0.022	1.585	0.178
	Roy's Largest Root	0.022	1.585	0.178
Gender	Pillai's Trace	0.021	1.586	0.178
	Wilks's Lambada	0.979	1.586	0.178
	Hotelling's Trace	0.022	1.586	0.178
	Roy's Largest Root	0.022	1.586	0.178

Table 4. Monova test results for subscales of the quality of life

Resource	Dependent variable	Sum of squares	Degree of freedom	Mean of squares	F	Sig.
Group	Physical health	1.948	1	1.948	1.150	0.284
	Mental area	1.310	1	1.310	0.138	0.711
	Social communications area	0.281	1	0.281	0.169	0.682
	Environmental area	10.186	1	10.186	2.246	0.135
	Quality of life	0.015	1	0.015	.0000	0.984
Gender	Physical health	0.028	1	0.028	0.017	0.898
	Mental area	14.483	1	14.483	1.521	0.218
	Social communications area	1.721	1	1.721	1.033	0.310
	Environmental area	6.453	1	6.453	1.423	0.234
	Quality of life	27.055	1	27.055	0.779	0.378

Shown in Table 4, the results related to the quality of life and its subscales in gifted and normal students have not been significantly different ($P > 0.05$). Among male and female students, there is no significant difference in the quality life ($P > 0.05$).

4. DISCUSSION

According to the research findings, there is a significant difference between alexithymia in male and female gifted and non-gifted students. Our data support the conclusion that alexithymia was higher in gifted students than controls. A few studies were previously published to compare alexithymia in gifted and non-gifted students. A study in consistent with our results revealed that alexithymia was lower in gifted than non-gifted students Also, intelligence quotient was higher in gifted than non-gifted students [17]. Many studies confirmed that in alexithymia, emotional processing [18], changing emotional perception into emotional concepts and terms [19], and making emotional relation are disturbed [20]. Additionally, it was revealed that individuals with higher levels of alexithymia, compared to individuals with lower levels of alexithymia, pay less attention to perform specific tasks such as coupling verbal and non-verbal emotional stimuli [21].

As mentioned, one of the main signs of emotional disorder is the inability in expressing emotions. Weakness in verbal-linguistic can be one of the probable causes of emotional disorder in both groups of students [18]. With respect to the fact that most of gifted individuals are interested in abstract concepts of good and bad, true and false, and justice and oppression in the primary ages, most of studies revealed that gifted people are superior over normal individuals in terms of moral behaviors. As one of the considerable behavioral traits in gifted children which are socially very important, it can be referred to their willingness to lead the group. They participate in activities voluntarily or before joining to the considered group, they carefully observe and evaluate its members' behavior. Gifted individuals also have a strong feeling of social justice; they are interested in others' welfare and are influenced by some problems such as poverty and others' suffering, injustice and non-human behavior [22]. They attempt to understand others' emotions [23].

It was also found that there is no significant difference between the quality of life in female and male gifted and non-gifted students. To explain this, it can be stated that promoting the level of life quality involves two general factors. The first factor is related to the individual

himself/herself and the second factor is related to health and case organizations and institutions. Considering the first factor, each individual is expected to increase his/her primary health behaviors to promote the quality of his/her life which is, in fact, considered those activities performed to prevent disease or its negative consequences, including appropriate diet, sport, avoiding smoking and alcohol and etc. with respect to the second factor, various studies have shown that increasing the efficiency of mental-health centers in schools causes the decrease of mental-social problems. Therefore, establishing consultation centers in schools, increasing recreational and sport facilities and programs, and periodic health examination by physicians cause the improvement of the quality of life.

There were a number of limitations in our study that warrant caution against generalizing our results. First, the cross-sectional nature of our study prevents any conclusion regarding causality. Prospective cohort studies are a more reliable way of determining casual relation between gifted students and quality of life or alexithymia. Second, this study did not assess the clinical significance psychiatric disorders, but only in relation to alexithymia through the utilization of the TAS-20. We relied exclusively on self-reported measures when assessing the alexithymia and quality of life. Hence, this cannot give an estimation of the extent to which reported levels of gifted/non-gifted related to alexithymia or quality of life. Further research is recommended to compare the psychological profile in gifted and non-gifted students through clinical diagnosis such as structural clinical interview. The results of our study are important for future RCT's using the psychological intervention as an intervention for non-gifted students with alexithymia.

5. CONCLUSION

In conclusion, the present study shows that alexithymia or low quality of life is not prominent in gifted students. This study supports that gifted students understand and process emotional better than non-gifted students.

CONSENT

It is not applicable.

ETHICAL APPROVAL

Ethical approval was granted by Islamic Azad University of Sari.

ACKNOWLEDGMENTS

The authors thank the students who participated in the study.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Kazemi P. Investigating the effectiveness of the program of promoting the quality of couples' life on marital satisfaction and mental health. *Clinical Psychological and Consultation Researches*. 2011;2:71-86.
2. Ebrahimi Z. Investigating the relation of SMS addiction with social skills and the quality of high schools students in Kalat City. MA thesis, Islamic Azad University, Sari Branch; 2012.
3. Bazar Chamazokti R. Investigating the relation between planning leisure time and the quality of primary school students. MA thesis, Islamic Azad University, Sari Branch; 2012.
4. Nejat S, Montazeri A. Standardization of the world health organization quality of life questionnaire: Translation and psychometric Iranian species. *Journal of School Health and Health Research Institute*. 2006;4(4):1-12.
5. Sifneos PE. The prevalence of Alexithymia characteristics in psychosomatic patients. *Psychotherapy and Psychosomatics*. 1973; 22(8):255-262.
6. Sifneos PE. Alexithymia, clinical issues, politics and crime. *Psychotherapy and Psychosomatics*. 2000;69(4):113-116.
7. Swart M, Kortekaas R, Aleman A. Dealing with feeling: Characterizations of trait alexithymia on emotion regulation strategies and cognitive-emotional processing. *American Psychologist*. 2009; 53:1010-1027.
8. porcelli P, Tulipani C, Maiello E, Cilenti G, Todarello O. Coping and illness behavior correlates of pain experience in cancer patients. *Journal of Psycho-Oncology* 2007;16(7):644-650.
9. Besharat MA. Relation of Alexithymia with ego defense styles. *Journal of Fundamentals of Mentale Health*. 2008; 10(3):181-90. (Persian).

10. Motan I, Gencoz T. The relationship between the dimensions of alexithymia and the intensity of depression and anxiety. *Turky Journal of Psychiatry*. 2007;18(4): 33-43.
11. Faramarzi M, Shokri-Shirvani J, Kheirkhah F. The role of psychiatric symptoms, alexithymia, and maladaptive defense in patients with functional dyspepsia. *Indian J Med Sci*. 2012;16:40-48.
12. Parker JDA, Taylor GJ, Bagby RM. The relationship between emotional intelligence and alexithymia. *Personality and Individual Differences*. 2001;30:107-115.
13. Salemin J, Saariv S. Two decades of alexithymia. *Journal of psychosomatic Research*. 1995;39(7):803-807.
14. Besharat MA. Reliability and factorial validity of Farsi version of the Toronto Alexithymia Scale with a sample of Iranian students. *Psychological Reports*. 2007; 101:209-220.
15. Usefy AR, Ghassemi, Gh R, Sarrafzadegan N, Mallik N, Baghaei AMK. Psychometric Properties of the WHOQOL-BREF in an Iranian Adult Sample. *Community Mental Health Journal*. 2010;46(2):139-147.
16. Taylor GJ, Bagby M, Parker JDA. *Disorders of affect regulation: Alexithymia in medical and psychiatric illness*. Cambridge University Press; 1997.
17. Masoumeh Karimi M, Besharat MA. Comparison of alexithymia and emotional intelligence in gifted and non-gifted high school students. *Procedia Social and Behavioral Sciences*. 2010;5:753-756.
18. Bagby RM, Taylor GJ. Affect dysregulation and alexithymia. In: Taylor GJ, Bagby RM, Parker JDA, editors. *Disorders of Affect regulation: Alexithymia in medical and psychiatric illness*. Cambridge: Cambridge University Press; 1997.
19. Suslow T, Junghanns K. Impairments of emotion situation priming in alexithymia. *Personality and Individual Differences*. 2002;32(3):541-550.
20. Conrad R, Schilling G, Langenbuch M, Haidl G, Liedtke R. Alexithymia in male infertility. *Hum reprod*. 2001;16:587-592.
21. Yao Lin S. FMRI of a visual-patterns N-Banck working memory task in typical development. Masters of Science Thesis. Institute of Medical Science University of Toronto; 2012.
22. Tekin M, Tasgin O. Analysis of the creativity level of the gifted students. *Procedia Social and Behavioral Sciences* 2009;1088-1092.
23. Sharifi Daramadi P. *psychology of exceptional children* author. Publisher: Psychometric Book; 2001.

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