Original Article

A Gender Difference in Emotional Intelligence and Self-Regulation Learning Strategies: Is it true?

Shahin Karimpour[1], Arezou Sayad[2], Mohammad Taheri[2], Khadije Aerab Sheibani[1]*

[1] Department of Psychology, Payame Noor University, Tehran, Iran
[2] Department of Medical Genetics, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Abstract

Background: Self-regulation learning (SRLS) and emotional intelligence constructs among youth considering effectiveness and enhancement of optimization and quality of life.

Materials and Methods: The research sample composed of 200 students who studied at Iranian universities in 2016-17 academic year. SRLS and Goleman's emotional intelligence questionnaire were utilized in this research. Collected data was analyzed using Pearson's correlation coefficient and multivariate regression technique.

Results: Scores of goal setting and planning (p=0.009) and self-consequating (p=0.021) were higher among females, and those of support from teacher (p=0.014), notes review (p=0.001), and homework review (p=0.004) were higher among males. Furthermore, regarding emotional intelligence, scores of self-motivation (p=0.012) and social skills (p=0.008) were higher among males.

Conclusion: Goal-setting and planning for these strategies help people organize materials more easily, and understand that, self-consequating includes learner's judgement about his/her own capabilities, and this self-trust contributes to better implementation of his/her cognitive skills in his/her studies. Regarding the support from teacher, notes review and homework review among males, which fall within the scope of resource management strategies, by organizing learning environment, seeking support from parents and teacher, and adjusting efforts help the learner either eliminate or attenuate distraction, and the fact that others can help us. Furthermore, both note taking and note reading contribute to better recovery of information from memory. This strategy includes administrating or regulating one's own and others' emotions, appropriate adoption of those in human relationships, controlling instantaneous desires, and confronting opposite or negative emotions. Being composed of self-motivation and social skills, this strategy has higher levels among males.

Keywords: Emotional intelligence, Self-regulation learning, Gender difference

*Corresponding Author: Khadije Aerab Sheibani, Department of Psychology, Tel: (+98) 563 2721800; Fax: (+98) 563 2727999; E-mail: shakiba_a_shaibani@yahoo.com

Introduction

Today, developing efficient and independent human force is among the most important objectives followed by all education systems. As such, any

research about educating individuals who can enhance their learnings in a self-motivated and self-regulated will serve as a significant and fundamental contribution. Moreover, regarding academic failures, strategies for improving learning process and

academic progress of students are among factors, which require adequate deal of attention. Hard working, endeavoring and receiving support from teachers and friends, can modify self-organization or self-regularization processes. Fiske and Taylor defined self-regularization as the set of methods through which people control their acts directly[1]. That is, formation of emotional intelligence roots back to early years of the kid's life, and these capabilities comprises the building block of learning through all senses[2].

Recently, a great deal of research has been performed on disorders in emotional intelligence and its effects on quality of life, occupational and educational success, resistance against stress, health status, and quality of social and marital relationships. These studies have indicated that, emotional intelligence contributes into success and happiness through life[3-5]. Nowadays, each and any society pays a special attention to education, with optimal and desired learning by the learners being on top of the list of subjects discussed under this general topic. Of the important problems that can contribute to desirable learning by learners and make the education effort effective, one can refer to presentation and educating strategies toward promoting self-regulated learning, emotional intelligence, and self-efficiency by raising internal excitation.

Zimmerman and Pounz presented a model by combining 14 classes of SRLS along with Goleman's emotional intelligence, which is used in the present research[6]. Every day, more practitioners find that, as far as personal and occupational success of people is concerned, the role of emotional intelligence is more important than that of general intelligence. Bar-On's emotional intelligence questionnaire (2006 edition) is one of the most popular psychometric tools, which focus on the subject's capability for achieving success when faced by external requests and pressures, with emotional and social functions developing the experience of physiological well-being[7].

The present research aims at expressing gender differences between males and females in SRLS and emotional intelligence as well as adoption of SRLS and emotional intelligence. This may help solve numerous problems and issues.

Methods

Statistical population and sampling method: Statistical population of the present research composed of 200 students who studied at either University of Tehran or Shahid Beheshti University of Medical Science during 2016-17 academic year. The statistical population was sampled via random sampling using Morgan's table. Of this population, 100 were males and the remaining 100 were females. Moreover, 100 students from each of the universities were sampled. Sampled students were studying for different degrees, with their age ranging between 20 and 40. The study was a descriptive correlational study.

Implementation of the research: According to the procedure developed for this study, researchers referred to the mentioned universities during a period of two months, and undertook the required tests (i.e. filling SRLS sale and Goleman's emotional intelligence) on the sampled students.

1. Self-regulation learning strategies (SRLS) questionnaire: In the present study, in order to evaluate SRLS of the students, SRLS was utilized. Zimmerman and Pounz[6] have developed this scale. This scale is composed of 27 items, of which the initial 24 item refer to the so-called 14 strategies for self-regulated learning, with the final score of each individual being the some of these 24 items.

2. Goleman's emotional intelligence questionnaire: Emotional intelligence refers to the ability to monitor one's own and others' emotions and excitement and to distinguish between one's own and others' emotions, so as to adopt emotional knowledge to guide thought and establish communications with own and others[8].

The questions in this test related to dimensions of emotional intelligence, each of which has a separate score. These dimensions include self-awareness, self-regularization, self-motivation, sympathy and social tasks.

Reliability and validity: The reliability coefficient of the SRLS and Goleman's EQ questionnaire was presented in Table 1.

Statistical analysis: The independent t-test was applied for data analyzing. P values and CI 95% for mean differences were estimated. As for the level of significance, p value was set at ≤0.05. The analyses were performed using SPSS version 18, serving as

Windows statistical package (Chicago, IL, USA).

Results

In this study, the sample was conducted among 200 students (100 male students with an average age of 25±2.4 and 100 female students with an average age

of 24±1.9) who were studying at Iranian universities in 2016-17 academic year.

Figure 1 and 2 present findings related to SRLS and emotional intelligence. Considering the results of independent *t* test, significant differences were observed between males and females when it came to
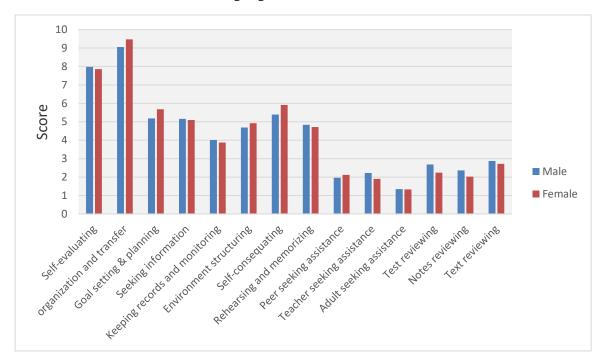

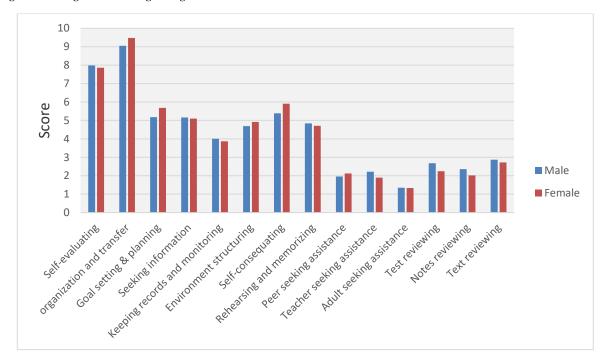**Figure 1. Self-regulation learning strategies in males and females.**

Figure 2. Emotional intelligence strategies in males and females.

Table 1: Reliability coefficient of SRLS and Goleman's EQ questionnaire.

Variables	Reliability coefficient calculated by Cronbach's alpha
Self-regulation learning strategies questionnaire	0.71
Goleman's emotional intelligence questionnaire	0.51

Table 2: Comparison of self-regulation learning strategies between males and females.

Self-regulation learning strategies	Men Differences	Standard error	t-test	95% CI		p value
self-regulation learning	.03	1.27	.02	-2.47	2.53	.981
Self-evaluating	.12	0.20	.59	-0.28	0.52	.557
organization and transfer	-.42	0.27	-1.55	-0.95	0.11	.122
Goal setting & planning	-.50	0.19	-2.64	-0.87	-0.13	**.009**
Seeking information	.06	0.23	.26	-0.39	0.51	.795
Keeping records & monitoring	.14	0.22	.64	-0.29	0.57	.523
Environment structuring	-.23	0.21	-1.10	-0.64	0.18	.273
Self-consequating	-.52	0.22	-2.33	-0.96	-0.08	**.021**
Rehearsing & memorizing	.13	0.24	.53	-0.35	0.61	.594
Peer seeking assistance	-.16	0.13	-1.21	-0.42	0.10	.229
Teacher seeking assistance	.32	0.13	2.49	0.07	0.57	**.014**
Adult seeking assistance	.02	0.09	.22	-0.16	0.20	.823
Test reviewing	.44	0.13	3.26	0.17	0.71	**.001**
Notes reviewing	.34	0.12	2.89	0.11	0.57	**.004**
Text reviewing	.15	0.14	1.06	-0.13	0.43	.289

average scores of goal-setting and planning ($p=0.009$), self-cons equating ($p=0.021$) (which were higher among females), and support from teacher ($p=0.014$), notes review ($p=0.001$), and homework ($p=0.004$) (which were higher in males) (Table 2). Regarding emotional intelligence, considering the results of independent *t* test, the difference between average scores of males and females were significant when self-motivation ($p=0.012$) and social skills

($p=0.008$) were concerned, with men exhibiting higher average scores (Table 3).

Discussion

Comparing the results, females obtained higher average scores in goal-setting and planning (which refers to setting primary and secondary goals for education and preparing plans to improve learning process), and self-consequating (which refers to one's

Table 3: Comparison of emotional intelligence strategies between males and females.

Emotional Intelligence Strategies	Mean Differences	Standard error	t-test	95% CI		p value
self-regulation learning	1.58	0.864	1.82	-0.12	3.28	0.069
self-awareness	0.04	0.38	0.103	-0.72	0.8	0.918
self-regulation	-0.05	0.43	-0.116	-0.89	0.79	0.908
self-motivation	0.93	0.36	2.54	0.209	1.65	0.012
empathy	-0.27	0.39	-0.682	-0.1.05	0.511	0.496
social skills	0.85	0.31	2.7	0.22	1.47	0.008

expectations from his/her own, i.e. reconfiguration of student or his/her perception of awards or penalties toward achieving success or ending up with failure). Accordingly, the females seem to be superior to males when it came to using SRLS vial planning and self-expectancy represented by goal-setting self-consequating, while the studied males ended up with higher scores in supporting from teacher and reviewing homework and notes.

In terms of emotional intelligence, males had higher levels of self-motivation and social skills, indicating that females have large potentials for self-motivation, awareness and regulating and controlling emotional responses, i.e. management (control) of one's own and others' emotions and exhibiting appropriate response to those and controlling the appropriate response have had higher scores.

Goal setting and planning as well as self-consequating exhibited higher scores among females, while support from teacher, notes review, and homework review ended up with higher scores among males.

All experts agree that SRLS includes three principle components along with one other dimension regarding resource management. These dimensions include cognition, metacognition, motivation and resource management.

In the scope of goal setting and planning, wherein females ended up with higher scores than males, investigation of whether or not the goals are actually achieved represents some metacognition, i.e. the choice of appropriate strategies to realize the plans and thereby achieve the set goal. There are three main metacognition strategies, namely planning, surveillance and regularization or goal-setting

strategies.

Goal-setting and planning strategies; these strategies are similar to a subject for a research, and contribute to forecasting required deal of study and learning, rate of reading, and the approach toward the subject matter of learning, helping the individual in activating his/her previous knowledge related to his/her homework. In this way, the student can organize and comprehend learning materials more easily.

Self-consequating and self-efficiency beliefs; In case the learner trusts in his/her own cognitive skills, it is more likely for him/her to actually adopt the cognitive skills in his/her studies. Self-efficiency includes learner's judgement about his/her capabilities for fulfilling the goals and specific assignments, and is expressed by undertaking them in well evident situations. Previous research works have highlighted the influence of self-efficiency on other strategies. The learners who were interested in the contents of training courses exhibited significantly further motivation and preparedness for expressing positive emotions and adopting cognitive and metacognitive skills in relation to assignments in actual learning situations.

Pintrich referred to three general classes of strategies[9]: 1) cognitive strategies for learning, 2) self-regulation and metacognitive learning strategies, 3) resource management strategies. Cognitive strategies are behaviors and thoughts, which affect the process of learning in such a way that information that can be stored in memory more effectively. Cognitive strategy divided into three groups of sub-strategies, namely reviewing and over practicing, extension, and organization. This parameter was of higher score among males.

Pantrich and De Groot divided cognitive strategies

into three groups of sub-strategies, namely reviewing and over practicing, extension, and organization[10]. Repeating and over practicing strategies: Upon this strategy, learners practice and review the materials they learn. The simplest form of this strategy includes reading (over reading) the material multiple times and writing the material several times (over writing), repeating keywords or key terms loudly, underlining important parts, annotating, and highlighting parts of the book.

Resource management strategies: These include management and regularization of reading time and environment and monitoring efforts. The student can also learn from his/her mates or request for support from his/her teachers, parents, or mates. Resource management strategies for SRLS include time management and control, organization of learning environment; seek support from others and regulating efforts. These help the learner eliminate or attenuate distractions.

Seeking support from other: These strategies include the necessity of supporting and the fact that others can help us and to way to ask my questions from others.

In the present expresses that males have higher scores in these scopes, i.e. homework review, notes review, and support from teacher and parents. Emotional intelligence, self-motivation, and social skills were higher in males.

Salvi and Mayer defined emotional intelligence as raising awareness and regulating and controlling emotional responses to one's own[2].

The concept of emotional intelligence highlights personal differences in the way for reasoning about one's own emotions, and as a capability, it includes the capacity to perceive, comprehend, apply, and manage (control) one's own and others emotions. Emotional intelligence refers to motivation, awareness, and regularization and control of one's own emotional responses (fourth branch of Salvi and Mayer).

According to Salvoy and Mayer's theory, administration or regularization of one's self and others' emotions and appropriately applying them on human relationships, perception of one's own and others' mood, self-control and dominance over instantaneous desires; this self-motivation was of

higher score among males.

Moreover, regarding social skills including the first branch of Salvi and Mayer theory, this refers to the feeling and expression of emotions and in social skills and inter-personal relationships, which is a representation of verbal and non-verbal information on emotional system. That is means the confrontation of compatibility with opposite or negative emptions, which improves either intensity or length of such emotions, and includes concealing negative emotions to avoid harming personal emotions of others. The score of this item was higher among males.

From Bar-On's point of view, emotional intelligence refers to a set of non-cognitive abilities, skills, and knowledge, which affects the ability to successfully deal with desires, contingencies and environmental pressures[7]. The studies by Nelis *et al.* were indicative of effectiveness of emotional intelligence on success and happiness in life[3].

Goleman researched on the yield of emotional and general intelligence and shoed that emotion serves as a foundation for adopting intelligence[8].

Theory of emotional intelligence by Salvi and Mayer has four branches[2]. The first branch is focused on feeling and expression of emotions and is a representation of verbal and non-verbal information on emotional system (i.e. confrontation of compatibility with opposite or negative emptions using self-regulated methods, which improves either intensity or length of such emotions, and includes the capability for developing enjoying conditions for others and concealing negative emotions to avoid harming personal emotions of others). The second branch focuses on facilitating the process of thinking, which is performed via emptions. This is means to adopt emotions as a part a cognitive flow, e.g. creativity and problem solving. The third branch is emotional perception and comprehension, which includes cognitive processing of the emotions. The fourth branch is regularization or administration of one's own and others' emotions[11]. Mayer *et al.* believed that, the subject matter of emotional intelligence includes paying attention to emotions and appropriate application of them onto relationships and perception of one's own and others' situations, self-control, and dominance over instantaneous desires; in this regard, the studied males obtained higher scores in self-

motivation and social skills.

The ability to confront and adapt to opposite or negative emotions using self-regulation techniques improves the intensity and length of the emotion, and the ability of concealing negative feelings to improve communication and social skills was higher among males.

Conclusion

The present research suggests that, in self-regulated learning, goal-setting and planning as well as self-consequating scores were higher among females, while males exhibited higher scores in homework review, note review, and support from teacher. When it came to emotional intelligence, self-motivation and social skills were of higher scores among males. These positive points efficiently are presented in both groups, and one can follow the application and effectiveness of these components by undertaking research works, which may end up with guidelines for improvement and effective education.

Acknowledgment

None.

References

1. Fiske ST, Taylor SE. Social cognition. Second edition. 1991. p. 501-11.

2. Salvi A, Carrupt PA, Mayer JM, Testa B. Drug metab dispos. 1997;25:395-8.

3. Neil T. Social happiness: Theory into policy and practice. Social happiness: Theory into policy and practice. 2004. p.81-95.

4. Karimpour, SH. Comparison of the Relationship between Self-Educational Learning Strategies, Motivational and Intelligence Components with Academic Performance of Second Year Girls and Boys in Ahwaz High Schools. 1995. p. 68-72.

5. Karimpour, SH. The relationship between self-regulated learning strategies, motivational factors (self-efficacy, intrinsic values, test anxiety), and intelligence with each other and with the academic performance of second year high school students in Ahwaz. 1997. p. 62-78.

6. Zimmerman BJ, Martinez-Pons M. Student differences in self-regulated learning: Relating grades, sex and giftedness to self-efficacy and strategy use. Journal of Educational Psychology. 1990;82(2):51-9.

7. Bar-On R. The Bar On Model of Social and Emotional Intelligence (ESI). Psicothema, 1997;18(1):13-25.

8. Golman D. Emotional Intelligence. Bantam. 1995. P. 98-109.

9. Pintrich PR. A conceptual framework for assessing motivation and self- regulated learning in college students. Educational psychology review. 2004;16(2):385-409.

10. Pintrich PR, De Groot EV. Motivational and Self-Regulated Learning Components of Classroom Academic Performance. Journal of Educational Psychology. 1990;82(1):33-40.

11. Maier M. Telling psychological tales, International Journal of personal construct Psychology. 1990;3(1):121-35.