The Effect of Empathy Training Programs on Aggression and Compatibility Students of Elementary Schools in Yazd, Center of Iran

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Abstract

Introduction
Empathy is believed to play an important role in fostering prosocial behavior and social competence. The purpose of this study was to evaluate the effect of empathy teaching on aggression and compatibility in female students of elementary sixth grade in yazd, center of Iran.

Materials and Methods
The samples were 62 girl students of grade 6 in elementary schools that were selected by available (targeted) sampling among girl students of grade 6 on Yazd. They were put in two groups of control group and experiment group randomly and equally. Data were collected by using empathy questions of (Eisenberg, Febs, Oscolar, Carlo & Miller, 1991) questionnaire about children behavioral disorder and Bus & Perry questionnaire and were analyzed with Mankoo & Ankova methods.

Results
The mean age of students was 13 ± 0.359 year-old. The Results showed that after controlling scores of pretests, there was a meaningful relationship between two groups in their empathy, social compatibility and aggression and its aspects (like physical aggression, verbal aggression, hostility and anger) scores (P< 0.05).

Conclusion
The development of empathy with training programs, can have a positive effect on reduce of aggression and increasing of compatibility in students at elementary schools.

Key Words: Aggression, Competence, Elementary schools, Empathy, Students.

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Introduction

Social adjustments in adolescents have attracted many psychologists attention to themselves as the most important sign of their mental health in recent decades. Adolescence course is a sensitive period and adolescent’s social adjustment undergo extremely great mental, physical and emotional changes has not grown completely yet. Delay in emotional maturity creates serious problems at interpersonal relationship at adolescents and social challenges for them (1).

Aggression, on the other hand, is one of the most common kid’s problems and the main causes of commission to psychotherapists (2). The kids find out very soon that they can bring to their demands by means of anger whereas aggression one of exciting and natural reactions of anyone is against failure and unpleasant situations. The resulting from studies, on one hand, shows that aggression kids tend to continued aggression in adulthood (3) and another hand, the reviews indicate the aggression and aggressive behavior is increasing in schools especially at recent years(4, 5).

Such behaviors leaving long-term effect and irreparable on school children. Such as poor self-concept and depressing(6), rejection by friendship(7) that it can underlie many problem like expulsion from school and crime (green man 2005), low adaptability of social-emotional(7), weak educational performance (as absence in school) and aversion from school(8). Furthermore aggression on the victims of such behaviors bring negative consequence such as depressing, anxious, feeling lonely, low self-esteem, thoughts of suicide (7, 9, 10), forming negative point of view than school that lead to avoiding from school (7).

Orientation to utilize drug, knowing herself as a vulnerable member in peer group and eventually acquiesce against the peer aggressive behaviors and repeat the victim tragedy (11). Therefore feel more than ever primitive distinguish necessity of this problem and also effective intervention and therapeutic procedures proportional with every kid.

The results of recent decade researches in field of empathy behavior confirm the role of this emotional communication at sanity and human social adaptability. The results of Gordon researches indicate the kids that contribute in empathy training programs was seen in them reduction of aggression, increase of social behavior and increase social and emotional perception. Therefore the kids learn to appreciate the difference between each other by empathy training. In general it can be said the empathy is core of all social behavior and lack of empathy is core of all antisocial behavior that according Boorba study (2008), children sympathetic do kindness and caring behaviors toward each other, they are sensitive for others and worry for them in the case of damage, they have positive emotion than others (listen, applaud and encourage) and they are tender toward nonverbal interactions (body language, facial expressions, tone of voice and gestures) (12). According to various studies that have been done, empathy is an elemental necessary for successful interpersonal functions and emotional response to feelings of another person (13, 14), and the infrastructure process of real psychological changes (15) that decrease interpersonal problems through the ability to share in other emotional states, receive regular feedback from interpersonal relations (16) and provide betterment background of social relations. Empathy allows the person to make contact with surrounding social environment. According to what was said, empathy is considered main subject in modern moral philosophy (17). According to the lack of empirical studies and researches in this field, the question of this research is that;
Is it due to a cognitive-behavioral training program of empathy can be changed social adjustment and aggression of sixth grade female students?

Materials and Methods

In this descriptive and correlational research, the study population consisted of all female students of second course of Elementary Sixth Grade in 13± 0.359 years old range, in Yazd city, the capital of Yazd province- Center of Iran, at 2014. At baseline, the objectives of the project were explained to the students and they all willingly participated in the study. Female students of second primary school were selected by randomized cluster sampling. All training was done in hours of free times for children. In this semi experimental research selected 62 people of female students of basic sixth elementary by available sampling (objective) and randomly divided to two groups (control group and experiment group) and each group consists 31 persons. After select sample, pre exam (empathy, social adjustment and aggression) were taken from all persons. It should be noted, present people in experiment group, participated in 15 sessions that hold twice sessions in a week due to existing limitations (such limited time) and totally training course lasted for two months. Post exam (empathy questionnaire and aggression) social adjustment, were taken after finishing sessions. The chapter heading of content of empathy training is presented in Table1.

Research tools

In order to collect data, in this research, 3 questionnaires were used as follows:

1. Empathy questionnaire

In this research, (Eisenberg, Fabes, Schaller, Carlo, & Miller, 1991) was used (18). This questionnaire includes 15 clauses and a three degree scales: I am so=score 3, sometimes I am so=score 2, I’m not like this=score 1. The final sufficient questionnaire reported 0.83 with style of Cronbach’s alpha. Eisenberg and partners (1991, according to the institute of Ravan Pooya, 2012) in their research have used the correlation of each item with total score and also factor analysis in order to determine of reliability of questionnaire. The result of factor analysis with the style of main component and also with significant (P<0.001), the result of Kaiser-Mayer-Olkin test (KMO=0.9) and Bartlett sphericity test (BTS=0.9) have confirmed a total factor of scale existing.

2. The questionnaire of behavioral disorder in children

In this research, the questionnaire of Ratter behavioral disorders in children (19) was used in order to social adjustment. This research includes 18 clauses and a three degree scales that are absolutely not true=score 0, partly true=score 1, completely true=true=score 2. Ratter and partners (1964) in their studies reported 0.74 the retest and internal invariance of questionnaire in a study, the pretest and posttest with 2 month period. To check the validity of questionnaire, Wong (1988) did a research and found out the questionnaire of behavioral disorders in children to recognition emotional disorder and conduct disorder of Chinese boys an Chinese girls are 0.96 and 0.93 respectively (20). Therefore, the questionnaire enjoys high reliability and also desirable.

3. Aggression questionnaire

In this research, Buss and Perry questionnaire (21) is used; this questionnaire includes 29 clauses and a five degree scales that is completely like me=score 5, partly like me=score 4, like me and not like me (mediocre)= score 3, partly not like me=score 2, not like me
This questionnaire also included four scales: physical aggression (9 phrases), theologian aggression (5 phrases), indignation (7 phrases), and hostility (8 phrases). Mohamadi et al. (22) calculated the final sufficient of questionnaire with the style of Cronbach’s alpha and reported physical aggression, theologian aggression, indignation, and hostility 0.82, 0.81, 0.83, and 0.80 respectively for subscale. Therefore, the questionnaire enjoys high variance and also desirable, also, convergent validity checked out and results indicated that there is a strong and significant relationship between the subscales of aggression. Therefore, the questionnaire enjoys high reliability and also desirable.

At the final data used for analysis of theories by utilizing of destructive statistics and inferential statistics such as ANOVA and MANVA. In this study, following statistical manners have used with utilizing of SPSS version 19 software in order to analysis data. P<0.05 was considered statistically significant.

**Table 1:** The content of the training sessions

<table>
<thead>
<tr>
<th>Sessions</th>
<th>The content of the training sessions</th>
</tr>
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</table>
| First session | Title: Cognitive learning of physiological feelings/mental increase of emotional words  
Agenda: The presentation of pre exams, communication with students, express the purpose of meeting, description of individual and social functions, the reasons expression of empathy learning, it’s consequences and benefits in life, describe about learning course. |
| Second session | Title: Consciousness: Identification of weak points/self concept and its important-increase of consciousness and positive and negative feelings and also its expression  
Agenda: get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, discuss about opinions and feelings of group and provide homework. |
| Third session | Title: Recognition of my weak points-increase self knowledge and self negative points  
Agenda: Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, role playing, stated and record the experiences about the subject of session and discussion in this context and provide homework. |
| Fourth session | Title: Consciousness and effective factors-recognition of situations and positions that lead to negative and positive feelings in person  
Agenda: Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, stated and record the experiences about the subject of session and discussion in this context and provide homework. |
| Fifth session | Title: Cognitive learning of physiological feelings/mental  
Agenda: Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, training feelings, display and playing role for feelings, stated and record the experience about your emotions and discussion in this context and provide homework. |
| Sixth session | Title: Personal goals-identify individual goals  
Agenda: Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, complete the form of weaknesses and strengths points, similarities and differences of your feelings with other and role playing, explanation the differences and similarities between yourself and others, describing the behavior of another, discuss and students feelings about this session subject and provide homework. |
### Seventh session

**Title:** My personal honors- recognition of individual opinions and beliefs  
**Agenda:** Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, role playing in two player and multi player groups, discuss about this subject.

### Eighth session

**Title:** Series friend-recognition others and explanation of their feelings  
**Agenda:** Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, role playing in two player and multi player groups, discuss about this subject.

### Ninth session

**Title:** Five skills of increasing knowledge  
**Agenda:** Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, role playing in two player and multi player groups, discuss about this subject.

### Tenth session

**Title:** What is sympathy?  
**Agenda:** Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, role playing in two player and multi player groups, discuss about this subject.

### Eleventh session

**Title:** What is empathy?  
**Agenda:** Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, role playing in two player and multi player groups, discuss about this subject.

### Twelfth session

**Title:** What skills do we need for empathy?  
**Agenda:** Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, role playing in two player and multi player groups, discuss about this subject.

### Thirteenth session

**Title:** What are the errors of interpretations?(definition, label, identification, etching of humanity, reflex response)  
**Agenda:** Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, role playing in two player and multi player groups, discuss about this subject.

### Fourteenth session

**Title:** What skills does empathy need?  
**Agenda:** Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, role playing in two player and multi player groups, discuss about this subject.

### Fifteenth session

**Title:** How does empathy reinforce?  
**Agenda:** Get feedback from previous session, the assignment of previous session review, expression a short summary of previous session, stated objective of this session, role playing in two player and multi player groups, discuss about this subject.

### Result

The mean ages of students were 13 ± 0.359. Descriptive findings of this research include statistical indexes such as mean and standard deviation (SD) of scores, aggression variables and its dimensions (Corporal, theologian, anger, and hostility). Statistics of pretest and post-test exam of research variables in experiment groups and control group is shown at Table.2.
**Table 2:** Pre-test and post-test exam of research variables in experiment groups and control

<table>
<thead>
<tr>
<th>Variables</th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Stage</td>
<td>Mean</td>
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<tr>
<td><strong>Corporal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggression variables</td>
<td>pre-test</td>
<td>20.55</td>
</tr>
<tr>
<td></td>
<td>pre-test</td>
<td>17.45</td>
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<tr>
<td><strong>Theologian</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>pre-test</td>
<td>20.65</td>
</tr>
<tr>
<td></td>
<td>post-test</td>
<td>15.74</td>
</tr>
<tr>
<td><strong>Anger</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>pre-test</td>
<td>18.23</td>
</tr>
<tr>
<td></td>
<td>post-test</td>
<td>15.10</td>
</tr>
<tr>
<td><strong>Hostility</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>pre-test</td>
<td>20.61</td>
</tr>
<tr>
<td></td>
<td>post-test</td>
<td>16.61</td>
</tr>
<tr>
<td><strong>Total Aggression</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>pre-test</td>
<td>80.03</td>
</tr>
<tr>
<td></td>
<td>post-test</td>
<td>64.90</td>
</tr>
<tr>
<td><strong>Empathy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>pre-test</td>
<td>27.94</td>
</tr>
<tr>
<td></td>
<td>post-test</td>
<td>33.29</td>
</tr>
<tr>
<td><strong>Compatibility</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>pre-test</td>
<td>11.74</td>
</tr>
<tr>
<td></td>
<td>post-test</td>
<td>9.10</td>
</tr>
</tbody>
</table>

**First theory:** empathy training cause increase of student’s empathy. One channel covariance analysis have used, for investigation of this theory, that results of this analysis have showed in Table 2.

After adjusting of pre-test scores, as test’s results revealed, significant difference obtained between the test and control groups in empathy average scores (P<0.001, F (59,1)=22.35, trivial square of ETA=0.28). Therefore, confirm the first theory of research. In other hand, empathy training according to adjusted average of empathy scores of experiment group (33.28) than adjusted average of control group (28.56), have caused increasing empathy in experiment group. The rate of effective or difference is equal to 0.28, in other hand, individual differences in empathy scores of experiment group concern with effect of empathy training is 32 percent.

**Second theory:** empathy training cause increase social adjustment of students. For investigate of this hypothesis one manner of covariance analysis is used that results of this analysis have indicated in Table 3. After adjustment of per exam scores as the results of exam showed, significant difference obtained between two groups of experiment and control in average scores of reading comprehension (P<0.001, F (59,1)=29.02, trivial square of ETA=0.33). Therefore, confirm the second theory of research. In other hand, empathy training according to adjusted average of empathy scores of experiment group (9.14) than adjusted average of control group (12.47), have caused reduction of behavioral disorders and another hand increase the social adjustment in experiment group. The rate of effective or difference is equal to 0.28, in other hand, individual differences in social adjustment scores of experiment group concern with effect of empathy training is 28 percent.

**Third theory:** empathy training cause reduction aggression of students. For investigate of this hypothesis one manner of covariance analysis is used. After adjustment of per-test scores as the
results of exam showed, significant difference obtained between two groups of experiment and control in average scores of reading speed ($P<0.001$, $F(59.1)=75.39$, trivial square of ETA=0.56). Therefore, confirm the third theory of research. In other hand, empathy training according to adjusted average of empathy scores of experiment group (64.90) than adjusted average of control group (77.71), have caused reduction of aggression in experiment group. The rate of effective or difference is equal to 0.56, in other hand, individual differences in aggression scores of experiment group concern with effect of empathy training is 56 percent.

**Fourth theory**: empathy training cause reduction of dimension aggression of students.

For investigate of this hypothesis multi variables covariance of analysis (MANKOVA) is used. At first the results of Mbox investigated in order to confidence from lack of violation assumptions of the same variance-covariance matrix. This assumption is not violation if the significant amount of Mbox be bigger than 0.001.

According to the MANOVA analysis, significant level of all tests were declaratory that between two groups of experiment and control observing significant difference in one of the aspect of aggression at least ($P<0.001$). Therefore confirm fourth theory. In other word, empathy training has caused reduction aggression dimensions in experiment group. The rate of effect or difference is equal to 0.58, in other word, 58 percent of individual in aggression dimensions scores of experiment group is concern to effect of empathy training.

For understanding to this point that which dimensions of aggression have difference between two groups, one manner covariance analysis performed and the results indicated there is significant difference between two group in item of all dimensions-physical aggression ($P<0.01$, $F=10.17$), verbal aggression ($P<0.001$, $F=32.67$), anger ($P<0.01$, $F=10.26$) and hostility ($P<0.001$, $F=19.18$), with control of effective of ancillary variable (pre-test) upon relate variables. It shows that empathy training can reduce its 4 dimension of aggression.

**Discussion**

The goal of this research has been investigation of empathy training effects and compatibility female students of elementary sixth grade in Yazd. The point that should be noted is that in reviewing the history of research, the studious didn’t observe that have been noticed to all or more consider variables in this research. Therefore in part “obtained agreement results with previous researches” the obtained results in some research variables is comparing with similar variables of results conceptually in another research.

**First theory**: empathy training cause increase empathy of students. This research matches with results of Lotfi research (24), conceptually. Implementation of emotional intelligence programs( 24) as well as its results, caused increased competences of emotional intelligence in subjects (25). Since the emotional intelligence change during human evolution, these skills can be improved by training and utilizing of various techniques. About the possible explanations (theory 1), we can beckon to following items based on the effect of empathy training upon increase empathy.

1. Effectiveness of training contents can be first possible argued. It is expected from course and training program, regulate and provide topics and training contents that enjoy maximum level of criterion validity, conceptual and content. Therefore it seems that the effective of empathy training upon
increase empathy is an important indicator and outstanding in effectiveness of empathy training course.

2. Training of communication skills upon increase empathy of students cause increase their empathy, comprehension of excitement, and other feelings. Empathy causes growth of desired and friendly society behaviors.

3. Positive attitude toward others lead to delete feelings and irritability and self-esteem in person and personality development of healthy community and eventually the person empathy up better than others and desired react toward emotions and feelings of others and cause collaboration of community members and solve the social injury and future desired behaviors, respect to privacy of others and healthy society.

Second theory: empathy training cause increase social adjustment of students. This research matches with results of Lotfi research (24) also this theory is alignment with Lopez, Mayer and Salvi conceptually based on effect of emotion intelligence training upon social adjustment (26, 27). It is possible that results of (theory 2) based on effect of empathy training upon increase adjustment, enjoy various probability explanations as follows:

1. The first explanation is that perhaps who have high empathy skill, have high social and psychological merits. For example, they can find many friends by empathy with others and at last utilize of them. In this case it is possible increase their adjustment by multiple situation and demands.

2. Whatever the level of emotion intelligence of students was more, enjoy from high affectional that this results can be justify by key components of emotion intelligence (consciousness and emotional management) that person with high emotion intelligence enjoy more consciousness and in fact they have deep understanding from their emotions, weakness and strength points, requirements and derives and they are able to evaluate, guidance and control facts of their lives that these abilities playing clear role in creating inside and vision toward to themselves and surrounding and improve compatibility strength of person, emotionally, and prevent sit the person in domination of emotions. In other hand, people with high emotion intelligence have desired emotion management and can better getting rid from negative emotions such as anxious and depressing and excitability and face less problems in vicesitudes and if face with problems they can getting rid from painful and difficult situations rapidly and get in emotional stability and desired situation. In probing for finding the study that aligned with these results can beckon to Lopez and partners (26, 27). They got to this conclusion that emotional skills are important for emotional and social adjustment of person.

Third theory: empathy training cause reduction aggression of students. This research is consistent with results of Bracket research and also Lotfi et al. (24, 28, 29). About possible explanations (theory 3), based on effect of empathy training upon reduction aggressive can beckon to follow items.

1. The first possible explanation is that empathy skill in person is usually accompany with desired rate of
adjustment. With assumption of this explanation, empathy skill in person is possible can reduce the aggression in people by adjustment.

2. The second possible explanation is that perhaps increase empathy skills in students help them in development social network and social support attraction. In this case, it is possible that support of friends and family can reduce or adjust numerous psychological pressures. As a result, aggression decrease so much.

3. In explanation of this theory should be say since the kids receive aggressive behaviors as pattern of their social environment and also environment help to production and reproduction of these behaviors. Presentation of templates and training is effective in this field and has influence in cognitive and behavioral dimensions and cause to reduce aggression.

4. Interpersonal skills will be improve by empathy training, your management skill, recognition your emotions and others and eventually your control and manage emotions will be happen as a result of improvement of interpersonal skill and become and aggression e less anger people with understanding emotions of others and his intension.

Fourth theory: empathy training cause reduction of aggression dimension of students. This research is consistent with results of Lotfi et al.( 24). The effect of empathy training on reduction of aggression dimension (physical aggression, verbal aggression, hostility and anger) (theory 4) have numerous possibility explanations as follows:

The first possible explanation is that these empathic behaviors usually have root in understanding and awareness of needs, feelings and others emotions. Therefore it is possible that training and learning of empathy skill propel person toward behaviors that have support and assistance feature, not hostile and damaging such as physical aggression and hostility.

The second is that perhaps people with empathy, supply their psychological requirement (such as tend to be effective) with help to others and this will be happy and joyous. Therefore, empathy skill in female students can make clear itself (empathy skill) in altruistic behaviors that accompany with the least aggression.

The third is that perhaps people that have learned empathy skill or have this feature in high level are sensitive toward feelings and emotions of others and react versus of unpleasant and undesirable of others. Therefore, it seems logical that increase empathy skill in students cause reduction of physical aggressive and verbal or hostility in them.

Conclusion

The results showed that obtained significant difference between two groups of experiment and control in average scores of empathy, social adjustment and aggression and its dimensions (physical aggression, verbal aggression, hostility and anger) after control the scores of relevant pre-test scores. According to results of this research, education and training and school administers should note to the role of empathy skill in increased empathy, social adjustment and reduction of student’s aggression in individual and organizational planning and according to results of this research, it is effective and useful to put empathy training programs and courses in educational counseling programs.

Limitations of the study included randomized cluster sampling and data collection methods based on individual reports. Therefore, generalization and
annotation of results must perform with cautious.

**Conflict of interest:** None.

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**References**


