

Effectiveness of False Belief Training (Theory of Mind) on Decreasing Behavioral Problems among First Grade Students

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Introduction

The theory of prerequisite mind for comprehension of social environment and the necessity of challenge in social behaviors are competitive. Beliefs reflect a method that is a world or at least what we want it to be a world. Thus, if we grasp that something is wrong, we will try to change it in accordance with the outside objects (Estington, 1993, as cited in Mashhadi, 2003). Understanding the false belief is the most important key factor in the theory of mind (Flavel et al., 1990, as cited in Jokar, Samani, Foladchang, 2000). The false belief means that a kid just relies on his or her own wants in behaving other people and does not consider others' beliefs; such students usually are not able to do well in assignments of false belief, whereas those who do these assignments well, possibly have a great understanding of homogeneous belief and inclination, in this case, the kid relies less on his/her wants.

Considering the theory of mind as an instrument for reduction of students' problems is used especially in their behavioral problems. Behavioral problems or disorders, are among the problems that is problematic for parents and society in childhood.

Those students and teens who suffer from behavioral problems, defeat in making friends, some are isolated and if other students or adults try to be in contact with them, they won't be successful. On the other hand, because of hostile and violent behaviors of the peers and adults, these students are rejected and this will reduce their educational opportunities (Parand, 2009).

From among other behavioral problems that causes the students' incompatibility with social environments especially the school, is the problem of anxiety and isolation that includes extroverted behavioral problems. Students suffering from this problem, easily get angry, are sensitive, become sad easily, and totally are timid, worried, down in the dumps, and sad, and their educational function sometimes gets negative and inappropriate (Faurence and Nitzee, 1992).

The main cause of considering the theory of mind associated with behavioral problems is widespread and it is considered as a peril that threatens students and students with suffering from mental diseases, attention deficit, personality problems, excitement-behavioral problems and anti-social behaviors.

Statement of the problem

Social knowledge is the conception of kid or person from social phenomena world and the way they are sequenced and also socio-epistemic processes that are acquired through social experience and social knowledge (Mohseni, 1996).

We humans live in a group and interact with each other, what distinguishes human social behavior from animals is the counteraction capacity. Superficially, this trait needs the person to know how the others think, and feel, such a capacity is called the theory of mind (Birch et al., 1997, as cited in Beheshti Aghdam, 2010).

This theory is the mind power to imagine your own and others' mental conditions, including goals, wants, excitements, and their beliefs (Salkind, 2002).

Using this theory, one can guess others' thoughts and behaviors as a reflection to his/her manner and try to reform or reinforce his/her beliefs, thoughts, and behavior. One area to use this theory is schools and learning areas to aid students with behavioral problems (disorders).

It is worth saying that behavioral disorders are tangible and observable in such students' educational problems. Not only such disorders ban educational improvement and behavioral disorders in students' functions, but also it becomes a base of tags like thickheaded, unable to learn, and the like. This will lead to further mental hurts. One way to cure those students based on the psychologists' beliefs and surveys is the use of false belief training in learning and training areas.

In Iran, no research is available on the effect of false belief training on behavioral problems reduction in elementary schools and there is too much vacuum in this area. For this reason, the current study is to consider whether False belief training would be effective in behavioral problems reduction or not? In other words, if it is theoretically confirmed that incomprehension of false belief would cause behavioral problems, does training comprehension of false belief practically lead to reduction of such problems? This study wants to consider the effectiveness of false belief training on first grade elementary students' behavioral problems.

Review of related literature

Mashhadi et al. (2011) have considered the students and teens' impaired vision in a study entitled the theory of mind evolution and its relation to social skills. The findings revealed that there is a significant relationship between the functions in practice prediction task, total score of social skills and the functions in both tasks(belief prediction and practice prediction)and the behavioral problems total score. Also, it predicts the verbal IQ, and age, and the function in practice prediction task.

Korkmaz (2011), concluded in a study that students would defeat in belief prediction task more than practice prediction task and Behpajuh et al.(2007) have considered this in a research named the effect of self-control techniques education on improvement of hyper-active students' social skills who lack attention. The findings revealed that self-control techniques education would improve hyper –active student's social skills who lack attention.

Research questions

Regarding the above issues, the present study wants to answer the following questions:

1. Does false belief training lead to first level increase in theory of mind in firstgrade elementary students?
2. Does false belief training lead to internalized problems reduction in first grade elementary students?
3. Does false belief training lead to externalized problems reduction in first grade elementary students?
4. Does false belief training lead to hyper-action behavioral problems reduction in first grade elementary students?
5. Does false belief training lead to behavioral problems reduction in first grade elementary students?

Design of the study

The design of this study is one of quasi-experimental pre-test post-test study in which the researcher considered the effect of one method on several variables changes.

The population and sample

It includes all male first grade elementary students studying in the year 2011-12, among which 50 students were chosen and divided into two 25 groups. For selecting the sample, the random sampling was used.

Instrumentation

It includes Steerneman mind theory questionnaire (1999), Rewn intelligence questionnaire (1938) and Gerasham and Elliot behavioral problems questionnaire (1990).

A)The Theory of Mind Test: The real design of this test was designed by Steerneman (1999) to assess the mind theory of normal children and those who suffer from growing up disorders between the ages 5 to 12 . It also provides information on the range of social understanding, child's sensitiveness and insight, and also the degree to which the child can accept others' feelings and thoughts (Ghamarani et al., 2006).

B)Intelligence Test: For gathering the related data, students' Rewn intelligence test was utilized.

c)Assessment of Behavioral Problems: for this, there has been made various scales that the most vital one is the ranking system of SSRS that was provided by Gresham and Elliott in the year 1990.

This scale has got 3 forms, parents, teacher, and student that involves two main parts of social skills and behavioral problems.

Procedure

After selecting the sample , and dividing them into 2 groups of experiment and control, the Rewn test, the theory of mind test, and the behavioral problems test were performed for both control and experiment groups as pre-test.

Then the experiment group, was exposed to the dependent variable i.e. false belief training about a month and a half, 9 educational sessions of 20 minutes, but the control group did not receive training during this period and just was asked to draw pictures

Finally, after training period, the theory of mind test and behavioral problems test were performed for both groups as post-test and the results were compared with the handwriting of first grade students in pre-test.

Results and Discussion

Q1: Does false belief training lead to increase of students' first level theory of mind?

Table 1. The results of ANCOVA for the effect of group membership on the sample's internalized problems in post-test.

	Sum of Squares	df	F	Sig.
Between Groups	11.027	9	3.92	.006
Within Groups	235.2	1	83.64	.000
Total	2.812	19		

Table 1 shows that the mean of post-test scores in experiment group is significantly more than control group. In other words, we can say that false belief training has caused score increase in experiment group. Adib and Tajreshi (2010) have considered the effect of training theory of mind on male students with mental disabilities, and concluded that false belief training on 3 levels of mind theory i.e. emotion recognition, the ability to believe the initial false belief, and the ability to believe the secondary false belief has a great positive effect.

Q2: Does false belief training lead to reduction of students' internalized problems?

Table 2. The results of ANCOVA for the effect of groups membership on the sample's internalized problems in post-test.

	Sum of Squares	df	F	Sig.
Between Groups	27.65	8	59.1	.000
Within Groups	13.33	1	28.5	.000
Total	0.47	20		

According to table 2, the mean post-test scores of experimental group is significantly less than the mean in control group. In other words, we can say that false belief training program can decrease the scores in experiment group.

Q3 : Does false belief training lead to a decrease in students' externalized problems?

Table 3. The results of ANCOVA for the effect of groups membership on the sample's internalized problems in post-test.

	Sum of Squares	df	F	Sig.
Between Groups	16.53	12	5.87	.001
Within Groups	34.3	1	12.14	.003
Total	2.81	16		

As observed in table 3, the mean of experiment group's post-test scores is significantly less than control group's. In other words, we can say that the false belief training program leads to a decrease in the scores in experiment group.

Q4: Does false belief training lead to students' hyper activeness reduction?

The result of table 4 reveals that the mean of the experiment group's post-test scores is significantly less than that of control group. In other words, we can say that false belief training program has led to a decrease in scores in experiment group.

Table 4. The results of ANCOVA for the effect of groups membership on the sample's internalized problems in post-test.

	Sum of Squares	df	F	Sig.
Between Groups	20.53	11	34.66	.000
Within Groups	26.13	1	44.12	.000
Total	0.59	17		

Frankle et al. (1997) who have considered behavioral interventions on students' hyper activeness reduction, have concluded that training social skills to students with impaired renal failure and hyper action would lead to reduction of behavioral problems and this disorder in them. Moreover, training their parents would cause the social skills training to be more effective.

Q5: Does false belief training lead to students' behavioral problems reduction?

Table 5. The results of ANCOVA for the effect of groups membership on the sample's internalized problems in post-test.

	Sum of Squares	df	F	Sig.
Between Groups	24.09	14	9.2	.000
Within Groups	213.33	1	81.49	.000
Total	2.62	14		

According to the findings of table 5, there is a significant reduction in the mean of experiment group's post-test scores, in comparison to the control group. In other words, we can conclude that the false belief training program has caused a decrease in the scores among the students in experiment group.

Conclusion

The mind theory is used for communication with others as a vital ability, an ability that is a need for socio-cultural functions, about what helps the understanding of children's of mind and mental states, there has been various opinions and the researches are in the process of genesis. Theoretically, mind theory believes that maturity is a vital process for students' mind theory evolution. For this reason, most 3-year old children cannot deal with mind theory tasks well. In the module approach on general growth, like neural, epistemic growth and data processing are the main origin of mind theory evolution. Simulation theorists, believe in introspection of mental statuses and inferences of others' mental statuses such as role play or simulation in mind theory, what is important in this view, is the role of the students' introspective experience that they have internalized the psychological concepts through experiences himself or herself and what evolves is simulation ability.

Normal students will reach to the point that others have different mental statuses that differs their own status. They recognize that the human's behavior cannot be perceived just according to situational characteristics. In this age, the perceptual skill grows in students based on which they perceive that behavior perception is dependent on mental reflection of a specific situation, the child would understand that perceiving phenomena and things are achieved separately and this is related to the previous perception and experiences. By entering school, students have better chance for faster and better growth in social recognition. But some students have disorders while entering school and some have some disorders due some inappropriate experiences. Those who have disorders while entering school can change due to school circumstances. Undoubtedly, the school has great effect on students. On one hand, the interaction between students' social competence and manner and on the other hand the classmates and teacher's behavior, is effective in emotional and behavioral problems. Whenever a child enters school with a bad manner, lacks needed skills for making socio-educational breakthrough. For this, there is a high possibility of facing negative reaction of teachers and peers.

Based on the previous study's conclusion and importance and role of mind theory in behavioral problems the goal of current study is determining the effectiveness of false belief training on elementary students' behavioral problems (disorders) reduction. The results show that false belief training causes reduction in externalized and internalized problems, hyper activeness and behavioral problems.

Limitations and studies for further research

One of the limitations of this study is related to the students' self-cognitive traits that affects their mind theory growth like linguistic ability but not controlled in this research.

The tests of this study, in the area of behavioral problems were paper and pencil tests and more effective assessments need interview and direct clinical assessments by trained assessors.

Finally, It is recommended to conduct this research with monolingual and bilingual students comparison, with sensorial problems and disabilities, and with growth evolutionary disorders and disabilities.

References

- Aghdam, Azam, (2010). *Comparison and study of mind theory in normal and deaf students*, M.A. thesis, Psychology College, AllamehTabatabai, Tehran University.
- BehPazhuh, R. (2007). *The effect of self- control techniques training in hyper active and impaired attention students' social skills improvement*, *Abnormal Children Journal*,7(1) , 2007, 1-18.
- Flavell, J.H.(1999). Cognitive development: Children's knowledge about the mind. *Annual Review of Psychology*,50, 21-45.
- Jokar, B. (2000). *Perspective-taking in pre elementary students: considering inter and intra personal scales*. *Education and Psychology Journal* 5(2), 137-160
- Kormaz, B.(2011). Theory of mind and neurodevelopmental disorders of childhood pediatric research, *Neuropsychiatric Disorders and Pediatric Psychiatry Journal*, 69 (3) , 101- 10
- Korkmaz, B. (2011). Theory of mind and neurondevelopmental disorders of childhood. *Pediatric Research*, 69 (5), 101-108.
- Mashhadi, A. (2003). Mind theory: New approach to evolutionary psychology, *News in Cognitive Sciences*,5(3)

Mashadi, A.(2006).Mind evolution theory and its relation with impaired vision students and teens social skills, evolutionary psychology, *Iranian psychologists*, 7(2).

Mashhadi, A., & Mohseni, A. (2006). A comparative study of mind theory competence and numbers mental maintenance of trainable pre-elementary retarded children, *Psychology Journal*, 38(2),134-155.

Mashhadi,A. (2011). Mind evolution theory and its relation to vision impaired students and teens social skills. *Evolutionary Psychology Journal: Iranian Psychologists*.7(27).

Mohseni, N. (1996). *Self-recognition of childhood and adulthood*. Tehran: Besat publication.

Parand, A. (2009). *Psychological assessment and testing*, Alsadat Publication, Tehran University.

Sereshki ,A. (2010). *The effect of mind theory training in trainable mentally retarded students' adaptive behavior improvement*, research in rehabilitation and medical sciences university.

White,S. J., Coniston, D, & Royers ,R. (2001). Developing the frith-happeonimations: A quick and objective test of theory of mind for adults with autism research.