



The Role Of Theory Of Mind In Projecting Moral Judgment Of Children Aged Between 7 And 10

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Abstract

The object of the study was to prediction the moral judgment of children based on theory of mind. Thus, 110 subjects of female children (55) and male children (55) aged from 7 to 10 from Firozeh City were selected cluster random sampling method. Next, the subjects answered the questions theory of mind, and moral judgment test. The findings were analyzed through enter regression. It was found that none of theory levels theory of mind can predict judgment by itself and just general theory of mind (total evolution levels) is able to project highly the moral judgment of children ($\beta=1.226, P<0.0001$).

Keywords: mind evolution theory, moral judgment, children aged between 7 and 10

Introduction

Ethical reasoning is an essential issue in the evolution of the theory of mind, the use of which requires judgments about human behavior [1]. Understanding the feelings of others is one aspect of moral judgment and theory of mind [2,3]. One of the critical tasks of children is to promote their social understanding of the nature of their own mental life and that of others. They need to learn that people have goals, intentions, and expectations; They need to know that people know some things and do not know some things, and if they believe in something, it does not mean that others feel the same. In short, they must know how the human mind works [4]. Social cognition is recognized as encompassing all the skills a child needs to understand the desires, emotions, and feelings of other children and adults [5]. Social cognition is a key ability we need to succeed in social interactions in everyday life. The subject is the social cognition of human beings and human affairs and means people's knowledge and actions. The growth of social cognition is organized around three crucial aspects: thinking about oneself; Thinking about humans, and thinking about human relationships. Social cognition has three constructs: personal perception; Skills of accepting the role, and theory of mind [6,7]. An aspect of social cognition that has gained increasing attention in recent years is the evolution of children's mind theory [8]. Mind theory can document mental states such as beliefs, desires, emotions, and goals to oneself and others and use this information to predict and interpret behaviors [9]. It is the cohesive body of knowledge about the human mind that we normally acquire and use to predict and describe the behavior of ourselves and others [10,11]. In the research literature, synonyms such as subjectivities, mind-reading, popular psychology [12], and social perception [13] have been used instead of the term theory of mind. The theory of mind dates back to 1978. This year, Primak and Woodruff coined the term mind theory in an article entitled "Do chimpanzees have a theory of mind" [14]. They described a series of studies that attempted to show whether chimpanzees have a theory of mind as follows: "A person has a

theory of mind if he attributes mental states to himself and others. The system required for such a conclusion is the theory of mind because mental states are not directly observable, and this system can be used to predict the behavior of others. To find what chimpanzees understand, we must look at what the human species can perceive, such as intentions, knowledge, beliefs, thoughts, doubts, conjectures, pretense, and love" [15,16]. Although the term theory of mind was first coined in 1978 by Primak and Woodruff to study the behavior of chimpanzees [17], how children perceive the mental states of themselves and others is not new. Simmons (2004) [18] states that the origin of this question goes back to the time when psychology was an independent field of income, and Baldwin in 1897 [19] exemplified that "the evolution of the understanding of others is a continuation of the evolution of self-understanding; And the child's social self is formed when he discovers that others think of themselves as 'I'; "This 'I' has different experiences than the 'self' of the child." Attention to this question can be seen in the views of other psychologists such as Piaget and Vygotsky. From Piaget's point of view, increasing social experiences and cognitive development lead to children's moral transformation, which leads to an increase in the capacity for role-playing. Hence, a moral transformation results from increasing the ability to perform duty towards the majority of people. According to him, moral judgments mean the child's understanding of the laws of morality and social custom [20]. Although morality is a social structure, it is meaningless without considering brain structures for creating emotions, thoughts, decisions, social communication, brain structures, and processing social ethics and social communication, emotional areas of the brain, and lips. Foreheads cooperate and interact with each other [21]. Learning and social learning theorists consider moral behavior as a set of certain actions and behaviors accepted by a society learned through reward and punishment [22]. Direct guidance and comprehensive teaching of social skills in elementary schools and younger ages will lead to higher social acceptance, children with social skills will be more social, more participatory, more confident, and more altruistic, and less They stay alone and have more friends in comparison children who have less social skills [23]. Children whose peers reject them have problems with social skills, miss opportunities for early communication, do not recognize social situations, and will not be able to find a partner to present their reactions. To coordinate the child's feelings and Others is one of the most important goals of social skills training that requires empathy. Empathy is a mechanism that affects the moral development of children (same source). Moral development includes regularity and commitment to treating people more fairly, and these rules can be studied in three cognitive-behavioral and emotional dimensions [24]. In 2006 Ghazi believes that ethics in experiences and business can be considered social capital [25]. Khosravi and Bagheri in 2008 [26] believe that moral values can be created and transmitted through curriculum planning. Kleberg also believes that any comprehensive ethical theory must include social rules and emotional elements such as the importance of providing for the well-being of others and the establishment of justice and equality. Like Kleberg, Adler believed that social interests lead to assimilation and empathy with humanity. Kleberg explains morality in terms of the concept of justice and argues that the moral judgments of children and adolescents imply different conceptions of this concept. In addition, children and adolescents' perceptions of justice vary from level to level. The highest level is the achievement of equal universal rights for all people and the realization of the highest human values in their lives. It has defined the moral transformation in individuals in three levels and six stages as follows:

- A) The level of pre-contractual ethics.
- B) level of contractual ethics.
- C) The level of super-contractual ethics

The first stage: morality, is based on punishment and obedience to the authorities. It is like a lousy theft because it is power disobedience and causes penalties [27]. In the second stage, the child performs actions to earn a reward [28]. In stage three, the morality of a good girl, a good boy, the child judges his activities based on good relationships with power sources and peers. It is imperative that others must approve his actions [29]. In the fourth stage, children blindly accept social rules, rules, and contracts and are reprimanded if they do not follow social rules [28]. In stage five, individuals consider rules and regulations as flexibility tools to advance human goals; they can consider other options for social order [30]. In stage six, right action is defined by the moral principles chosen by the conscience, which is valid for all of humanity, regardless of law and social contract. These values are abstract moral rules and are not objective. Ultimately, right and wrong behavior depends on one's conscious decision and choice and is based on abstract concepts as well as justice and equality. Universal Principles Universal principles are universal and absolute constants. Most people who reach this stage pay attention to their conscience regardless of finding fault and criticizing others [30]. According to the theory's assumptions, one of the most prominent views of the theory of mind, children judge a phenomenon according to their conceptual knowledge. According to theory, children are small scientists who make theoretical inferences based on existing data and then infer, explain, and predict similar or new situations. They may revise and refine their theory based on more recent evidence and experience [31]. Recently, researchers have sought to determine whether the theory of the mind's ability to comprehend others' thoughts is based on moral judgment [32]. Accordingly, the present study seeks to test the following hypotheses:

- 1) theory of mind can predict children's moral judgment.
- 2) Each level of mind theory predicts children's moral judgment.

Method

The type of study is descriptive and correlational. The statistical population of the present study included all students aged 7 to 10 years in Firoozeh city. The sample group had one hundred and thirty male and female students aged 7 to 10 years in this city selected by random cluster sampling. In this way, randomly selected two of the elementary schools in Firoozeh city, and in the next stage, randomly selected some students. Subjects then responded to the research tool. Finally, 110 forms that answered correctly were entered into statistical analysis and analyzed by simultaneous regression.

The research tools were:

A) "Theory of Mind" test: The main form of this test by Steinman [33,34] to measure "theory of mind" in normal children with pervasive developmental disorders aged 5 to 12 years It provides information about a child's range of social perception, sensitivity, and insight, as well as the extent to which they can accept the feelings and thoughts of others.

In the test, as mentioned above, changes have been made by Ghamrani et al. [35]. They reduced the number of test questions from 72 to 38 and used Persian names instead of foreign names. Then, they passed the test on a group of mentally retarded and regular students in Shiraz.

Validity and reliability of the test:

To evaluate the validity of this test content validity methods correlation of subtest with total score and simultaneous validity have been used. Simultaneous validity through the correlation of the test

with the dolls' homework was estimated to be 0.89, which was significant at the level of one hundredth. The correlation coefficients of the subtests with the test's total score are also substantial in all cases and between 0.82 to 0.96 has been variable. The reliability of the test was trial evaluated by three retest methods, Cronbach's alpha and the scorers' validity. Reliability of retest between 0.7 up to 0.94 It was variable, and all coefficients were significant at the level of one hundredth. Internal consistency of the test using Cronbach's alpha for the whole test and each of the subtests are 0.86, 0.72, and 0.80, respectively and 0.81 has been calculated. Also, the reliability coefficient of the scorers is 0.98 has been achieved. This test is designed based on a transformational and multidimensional perspective of the "theory of mind". It evaluates the age range and more complex and advanced levels of "theory of mind" compared to older tests. This test has three subscales in the following order:

1- The first subscale: "preliminary theory of mind", means "theory of mind" first level or the recognition of emotions and pretend, consisting of 20 questions.

2- The in the second scale, "in terms of a real theory of mind", means "theory of mind" second level or the initial false belief and understanding false belief, consisting of 13 questions.

3- The third subscale: "more advanced aspects of mind theory" means "mind theory" level 3 or secondary misunderstanding or joke perception, consisting of 5 questions.

From the sum of the above three subscales, an overall score for the theory of mind is obtained. The higher this score indicates that the child has reached higher levels of theory of mind [7].

B) Ethical Judgment Test (MJT): This test was first developed by Durganda-Sinha and Miravarma in 1971 and was last revised by them in 1998. The test is made in India for children aged 6 to 11 and is based on a general intelligence test pattern and includes questions of reasoning, cognition, best answers, etc., with the difference that all questions have moral meaning. The test consists of 50 questions on which the child must make a moral decision, group the moral work in the comments, establish the relationship between the words and the moral meaning, evaluate a specific action, reason rationally against moral problems and appropriate definitions of values. Choose moral. This test is divided into six groups, and there is only one correct answer for each question. A valid score is given for each question and zeroes for a wrong answer. Therefore, the maximum possible score is 50, and the minimum is zero. The total score will be the subject of moral judgment; Abolfazl Karami translated this test in 2000.

Validity and validity of the test: Durgandasins and Miravarma scored the answers of 300 children to the final questions and then calculated the validity of the semi-test using the Spearman-Brown formula, which is 93 [36].

Durganda-Sinha and Miravarma also interviewed children about their judgments of awareness of different moral values. They were based on fourteen moral values. This interview was recorded verbatim. Each of these reports was coded based on the consciousness of ethical values. The various categories were "without consciousness", "special consciousness", "general consciousness," and "imaginary consciousness". The above categories were given scores between zero and 3, respectively. The correlation between moral awareness and moral judgment scores ($r = 0.32$) was obtained [36]. The present study accepted the internal validity of moral judgment by Cronbach's alpha coefficient of 0.64.

Findings

Following this research findings, two categories of variables, namely criterion and predictor variables, have been studied in the present study. The sizes of these variables are calculated using the tools used and are presented in the relevant tables for more objectivity.

Table 1: Descriptive indicators, theory of mind, age and moral judgment

Variants	Mean	SD	Min	Max
Level 1 Mind Theory	19.59	0.81	16	20
Level 2 Mind Theory	11.78	0.98	10	13
Level 3 Mind Theory	3.98	0.84	2	5
Age (in years and months)	8.83	6.90	7.1	9.6
General Mind Theory	35.31	1.67	32	38
Moral judgment	36.10	4.92	25	46

Hypothesis 1: Theory of mind has a significant role in predicting children's moral judgment. To test this research hypothesis, a simultaneous regression method was used.

Table 2: Predicting moral judgment based on mind theory

Model	R	R ²	SD	F	df	df ²	P.v
1	0.79	0.62	3.07	44.42	4	106	<0.0001

Based on this table, it is inferred that the linear relationship between the predictor variables and the criterion variables is R=0.79. The coefficient of determination of these variables is equal to R²=0.62 this coefficient and determination coefficient with F=44.42 with the P-value of 0.0001 levels is significant. Therefore, the predictor variables are able to predict changes in criterion variables significantly. In other words, the theory of mind 0.62 Predicts changes in moral judgment significantly.

Table 3: Analysis of variance of criterion variable based on predictor variables

Indicator	Variants	X2	df	Mean square	F	P.v
Model Simultaneous	R	167.08	4	417/77	44.42	<0.0001
	Remaining	996.82	106	9.40		
	Total	2667.91	110			

The analysis of variance in the table above shows that the regression of predictor variables to the mean of the criterion variable is statistically significant. Because F =44.42 calculated at the level of P.v = 0.0001 is significant.

Hypothesis 2: Different levels of mind theory predict children's moral judgment.

Table 4: Predicting moral judgment from predictor variables

Indicators Variables	B	β	t	P.v
Level 1 Mind Theory	-0.922	-0.152	-0.941	0.349
Level 2 Mind Theory	-1.340	-0.268	-1.451	0.15
Level 3 Mind Theory	-1.635	-0.279	-1.493	0.138
Age (in years and months)	3.598	1.226	3.795	<0.0001

According to the β coefficients listed in the table above, it is clear that none of the levels of mind theory alone predicts children's moral judgment and only the theory of general mind, with a coefficient ($\beta= 1.226$) at the level of $P.v<0.0001$ Explains children's moral judgment.

Discussion and conclusion

A simultaneous regression test was used to test the first hypothesis, which was that the predictability of moral judgment is based on the theory of mind. The results showed that the theory of the general mind (sum of levels), with a value ($\beta= 1.226$) at the level of $P.v<0.0001$, predicts children's moral judgment. The linear relationship of the predictor variables with the criterion variables is $R = 0.79$; the coefficient of determination of these variables equals $R^2= 0.62$. This coefficient and determination coefficient with $F=44.42$ with the P-value of 0.0001 levels are significant. Therefore, predictor variables are able to predict changes in criterion variables significantly. In other words, mind theory predicts about 62% of changes in moral judgment significantly. Killenet al. developed a study of possible errors in the theory of mind based on children's moral judgment aged 3.5 to 7.5 years [2]. This study demonstrated that: Children who engage in misconceptions did not find that they had more errors in moral judgment than those who had grasped the concept of the theory of mind. It turned out that children use the theory of mind in their moral judgments. Also, studies conducted by School[37,38], found that children who interpret the thoughts and behaviors of others based on mind theory have a better understanding of moral reasoning.

Since mind theory is related to the ability to predict, mind-reading, understanding the beliefs and thoughts of others, as well as the relationship between mind theory and social adequacy and other variables related to peers and community members in different groups and the relationship Significance has been discovered between the mentioned variables, and on the other hand, that moral issues and moral judgments find meaning in relation to the peer group and the context of society, the prediction of moral judgment in children based on the theory of mind is not unexpected. And as mentioned, hypothesis (1) is confirmed. In other words, mind theory can predict children's moral judgment. Thus, social cognition and experience changes allow individuals to understand better larger social structures: social institutions and legislative systems that oversee ethical responsibilities. As awareness of social law increases, so do people's beliefs about what to do when needs and desires conflict, and increasingly toward justice and appropriate solutions to moral problems. Find. In 2011 Killen et al. developed a study on unintentional moral errors based on mind theory on 162 children aged 3.5 to 7.5 years [39]. This study showed that; Children who did not grasp the concept of misconceptions about mind theory tasks were more likely to make mistakes in documenting unintentional events when compared with children who had acquired the concept of misconception and who had grasped the concept of misconceptions offered moral arguments for unintentional events. Also, the role of different levels of mind theory in predicting children's moral judgment was tested as a secondary hypothesis. It showed that none of the levels of mind theory alone could predict children's moral judgment, but with increasing levels of mind theory, value (β) Increases. However, their t value is high and not significant. Therefore, the second hypothesis is not confirmed.

Moreover, it can be explained that by increasing the levels of evolution of the theory of mind from level one to level three, the complexity of this skill increases, and it takes on a more social and

external aspect. Since then, moral judgment in relation to individuals and members of society makes sense. This relationship is well illustrated because this transition from individuality to the peer group and society manifested at the third and higher levels in a general concept called "theory of mind," is more pronounced. This increase is gradual from bottom to top. That is, the value of the coefficient (β) also increases with increasing levels of mind evolution until it reaches its peak in a general concept of "theory of mind sum of levels" and becomes phlegm of the set of levels of mind evolution.

Moreover, only in this overall format can predict about 62% of children's moral judgment. Josha et al. state that people sometimes use the theory of mind for their moral judgment, and recent studies have shown this relationship well, although it can also be reversed. It means that people use the concepts of mind theory in their moral judgment [40].

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