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Original Article

The Effectiveness Of Emotional Interactions And Pre-Communication Skills In Social Skills Of Children With Autism Spectrum Disorder

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Abstract:

Background: The present research aimed at studying the effectiveness of emotional interactions and pre-communication skills in social skills of children with autism spectrum disorder (Case study: Parents of children with autism spectrum disorders in Tehran).

Methods: This research is an applied study in terms of purpose and a descriptive-survey study in terms of research method. The statistical population of the study are 140 parents of children with autism spectrum disorders in Tehran, of which 103 people were selected through Morgan Table as the research sample using simple random sampling method.

Methods: The tools utilized for the current research included the Emotional Interaction Questionnaire developed by Schutte et al. (1998), Quinn Dam's Communication Skills Scale (2004) and Evaluation of Social Skills developed by Matson et al. (1983). A simple linear regression test was also applied for data analysis using SPSS software.

Results: Findings indicated that emotional interactions affect the social skills of children with autism spectrum disorder... ($p < 0.05$). Pre-communication skills affect the social skills of children with autism spectrum disorder ($p < 0.05$).

Conclusion: According to the research findings, it was concluded that emotional interactions affect the social skills of children with autism spectrum disorder. Moreover, it was found that pre-communication skills influence the social skills of children with autism spectrum disorder.

Keywords: Emotional Interactions, Social Skills, Pre-Communication Skills.

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Introduction

Autism spectrum disorder refers to a set of symptoms that appear in early childhood and is characterized by problems in social interactions, relationships and flexibility (1).

In DSM-5, Autism Spectrum Disorder is classified as a developmental neurological disorder and its diagnostic criteria are categorized into two behavioral areas, including: 1) impairment in social communication and interaction, such as problems in social initiation and reciprocity, problems in non-verbal communication as well as problems in awareness and insight in social relationships, and 2) limited and repetitive behaviors, interests and activities, resistance to change, mental engagement with specific objects and subjects, and abnormal sensory behaviors (2).

Children with autism spectrum disorder are at risk of emotional and social problems. These children experience problems in social information processing, impaired perceptive taking, problems in social performance and play, social orientation, continuous attention, understanding emotions, sharing the feelings of others and imitation, impaired non-verbal expression of emotions, social problem solving and expressing social behaviors compared to normally developed peers (3). In children with autism, emotion regulation problem is so serious that some researchers consider it as one of the core features of autism and among the main criteria for diagnosing autism as well as the root of many behavioral-social-emotional problems in this population (4).

Emotional intelligence is the behavior and ability to recognize and control one's emotions and also to control the initiative of interpersonal relationships (5). Perhaps, the reason why the term emotional intelligence has received so much attention is that emotional intelligence provides a new concept of intelligence and people with high emotional intelligence can adapt themselves to life's problems and challenges, thereby improving and enhancing their mental health. On the other hand, low emotional intelligence can be a potential threat to mental health. (6).

There are many emotional and non-verbal cues in social relationships, and those who can better identify these cues respond better to them, and as a result, they have better social skills. Such people are better able to control more or less emotional arousal and show an emotion appropriate for social situations. These abilities are influenced by a variable called emotional intelligence, and in fact emotional intelligence has a great impact on social skills (7).

Slaby and Guevara (2003) equate social skills with social adjustment. According to them, social skill means the ability to interact with other people, especially in the social dimension, so that it is acceptable in the norms of society and has value. Gresham and Elliott (1990) argue that social skills are behaviors that enable an individual to interact effectively and avoid undesirable responses and indicate the behavioral and social health of individuals (8).

Strayer (1989) considers social skills as the child's adaptation to the social environment and peers. In this view, adaptation means the child's ability to anticipate, internalize, and respond to certain cues in a social context. Cues also refer to emotional states with peer behavior. One of the social tasks of children is to learn the skill of establishing a successful and interactive relationship with their peers. Preschool children learn behaviors such as turn-taking, participating, cooperating, paying attention to others and controlling anger through interaction with peers (9).

Another skill influenced by emotional intelligence is communication skills. Communication skills are those skills through which individuals can engage in interpersonal interactions and the communication process, i.e. an individual's ability to communicate collaboratively in groups, whether verbal or non-verbal. (10). These skills include the skills

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associated with "Understanding verbal and non-verbal messages?" "Organizing emotions", "listening", "Insight into the communication process" and "determination in communication", constituting the basis of communication skills (11). The purpose of the current study was to evaluate the effectiveness of emotional interactions and pre-communication skills in social skills of children with autism spectrum disorder.

Hypothesis

Emotional interactions affect the social skills of children with autism spectrum disorder.

Pre-communication skills affect the social skills of children with autism spectrum disorder.

Theoretical Foundations of Research

Emotion

Emotional intelligence is a type of intelligence that includes recognizing one's emotions and using them to make appropriate decisions in life (12). This intelligence includes recognizing and controlling one's emotions. In other words, a person with high intelligence successfully combines three components of emotions: cognitive component, physiological component and behavioral component. Research indicates that not only is emotional intelligence one of the human needs to deal with problems and relieve stress, but also significantly affects the individual's health of memory and power of reason, perception, giving meaning to experiences, correct judgment, appropriate decision making and psychosocial development. Various studies also suggest that people with high emotional intelligence have more able to adapt themselves to new and daily issues, career and professional growth and leadership (13).

Emotional intelligence theory provides a new perspective on predicting the factors influencing success as well as the primary prevention of mental disorders that complements the cognitive sciences, neuroscience, and child development. Emotional abilities are very important for skillful management of relationships with others (14).

According to Golmann, emotional intelligence includes characteristics such as the ability to stimulate and motivate oneself, to have endurance and perseverance in the face of failure, not to lose spirit, to repel depression and despair when thinking, and to have empathy, intimacy and hope (15).

Given the increasing behavioral and emotional problems, ranging from low self-esteem to anxiety and depression in children, adolescents and young adults, a large number of scientists and researchers around the world find it necessary to teach emotional intelligence skills to children and students. These skills can lead to increased adaptation and self-confidence and a greater chance of success in life and education. The family environment is the first place to teach emotional skills, this training takes place through direct behavior and speaking of parents with children and also through modelling the emotional skills of parents by children. This training makes children more successful in recognizing their feelings and expressing these emotions appropriately, finding ways to calm themselves down, and being able to understand the feelings of others and empathize with them. For such training, the parents, themselves, must have the necessary competence and emotional intelligence (16).

Importance of Emotional Intelligence

According to research conducted so far, emotional intelligence is more important for success than mental intelligence (IQ) and certainly plays a greater role in happiness, communication and career advancement. Studies have indicated that people with high emotional intelligence are able to understand the feelings of others, which is more useful for perceiving the needs and opinions of others and responding better to others in terms of language and behavior, and the harmonious relationship

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of these people with others is in such a way that a higher quality of relationship is achieved (17). According to Golmann's theory, emotional intelligence is what makes you control your emotions and realize the consequences of your thoughts and actions. Emotional intelligence generally includes the following skills:

- Recognizing one's feelings and emotions (self-awareness)
- Managing and controlling emotions and reactions (self-management)
- Motivate and try harder to achieve goals (self-motivation)
- Understanding the feelings of others and communicating effectively (empathy)
- Improving communication in different situations (social skills) (18).

Pre-communication Skill

According to Chireh et al (2019)(18), communication skills are the ability to perform a behavior that leads in achieving the goals of a task and, in fact, enables the individual to behave appropriately. Mirjafari (2011) (19) believes that having a skillful relationship depends on the correct and facilitative use of appropriate and efficient communication methods with others.

The Greek philosopher Aristotle was perhaps the first thinker to talk about communication 2,300 years ago. In his *Rhetoric*, which is often considered synonymous with communication, in defining communication, he writes: Communication is the search for all the available means and facilities to encourage and persuade others. Many of the definitions provided for communication are derived from Aristotle's definition to some extent (20).

Communication and communication skills in recent years, especially since 1950, have been considered by scholars and practitioners in the West in various disciplines from psychology, social psychology and sociology to management scientists. Each of the leaders in these disciplines has a perspective different from others that causes them to look at communication differently. Communication means all the methods by which a mind affects another mind, whether this communication is performed through words, writing, music, image or any other means (21).

Communication skills are those skills through which individuals can engage in interpersonal interactions and the communication process; that is, the process by which individuals express their information, thoughts, and feelings by the exchange of verbal and non-verbal messages with each other (22). These skills include secondary skills or sub-skills related to "understanding verbal and non-verbal messages", "organizing emotions", and "listening", "insight into the communication process "and" determination in communication which constitute the basis of communication skills (23).

Types of Communication Skills

Verbal skills

According to Rostami (2020)(24), some people can express what they mean using the right terms, examples, and proper organization of their opinions in their explanations, but others confuse everything, use terms that cannot be understood by their audience, apply inappropriate analogies as well as concepts and principles that the interlocutor cannot comprehend without understanding the subject matter they intend to express. Verbal skills are one of the most important and common social skills. Verbal presentation should be as fluent as possible. Listening to incomplete and aimless sentences will only lead to upsetting the audience.

Listening skill

Effective listening is an active process that involves paying attention, understanding, evaluating, remembering, and responding. Communication has an equation, half of which consists of effective speaking and the other half

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consists of "effective listening", but unfortunately most people who want to improve their communication skills pay more attention to speaking skills and ignore the listening skills. While some management experts consider the effective listening as the basis of communication skills and attach great importance to it (24).

Feedback Skill

Feedback skill means returning the result of the message to the sender of the message so that the sender of the message becomes aware of the status of sending the message and how to receive and understand it. It cannot be assumed that the listeners understood the sender's explanation and message by itself. Therefore, it should be checked whether they understood the message sent by the sender or not. In fact, feedback skill can be considered as the amount of effort that a person puts to better understand the verbal and non-verbal communication existing in the communication system. Existence of feedback skill makes the communication process successful and in essence provides a two-way communication that modifies the communication process by reducing the fundamental difference between the information and/or messages received and what was intended (24).

Social Skills

Social skills are a set of abilities that initiate and maintain positive and useful social relationships, develop friendships and intimacy with peers, create satisfying adjustments, and allow individuals to adapt themselves to the existing conditions and accept the social environment demands. The concept of social skills is generally one of the topics studied in identifying skills that lack of which can result in harmful consequences such as abnormalities, personality problems, emotional and behavioral disorders such as aggression (25).

Social skills refer to the ability to choose a behavior from a number of behaviors and actions when faced with a social situation. Poor social skills can negatively affect people's development. Participation and success in any social activity requires a certain amount of learning. How personality and mood of individuals develop is an important factor in how social learning of the person takes place and how they participate in various social activities. Healthy social development of an adolescent requires the natural development of personality and learning basic social skills (26).

Research Background

Yousefli et al., (2021) (6), in an investigation of the relationship of emotional intelligence and social skills with social anxiety of female high school students in the city of Khodabandeh indicated that there was a negative and significant relationship between emotional intelligence and social anxiety. Also there was a significant, negative relationship between social skills and social anxiety. The results of regression coefficient also showed that social skills were predictors of social anxiety. In general, it can be concluded that in order to treat social anxiety disorders, comprehensive care including reinforcing emotional intelligence and social skills is needed.

Ferasat et al., (2016) (27), investigated the relationship between social skills and emotional intelligence and academic achievement of junior high school students in district 2 of Khorramabad; the results showed that according to Pearson correlation coefficient 0.43 and with a significance level of 0.009, a significant positive relationship exists between social skills and academic achievement and also given the Pearson correlation coefficient 0.209 and with a significance level of 0.001, there is a significant positive relationship between emotional intelligence and academic achievement in junior high school students of Noorabad ($p<0/05$) with a confidence level of more than 95%.

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Rezaei, (2021) (28) attempted to predict communication skills and social adjustment of children based on perfectionism, and results of the correlation coefficient indicated that there is a negative and significant relationship between social adjustment and communication skills and parental perfectionism and also it was found that parental perfectionism could predict the children's adjustment and social skills by 54% and it could predict children's social skills by 22%.

Bruggink et al. (2016)(29) in their study examined the relationship between cognitive regulation of emotion, anxiety and depression in adults with autism spectrum disorder. The results showed that the group with autism disorder reported more use of blaming other technique and less use of positive reassessment compared to the control group. These results suggest the use of cognitive therapy for depression and anxiety in people with autism.

Samson et al. (2015)(30) investigated the relationship between emotion regulation disorder and the main features of autism, including social communication disorders, repetitive behaviors, and sensory abnormalities. They studied the emotional regulation problems on an 18-part scale. The results demonstrated that children with autism had more problems in all parts than children with normal development, and among children with autism, emotion regulation disorder was highly associated with the main features of autism, especially impairment in social behaviors.

Method

Considering that this study examines the effectiveness of emotional interactions and pre-communication skills on social skills of children with autism spectrum disorder by administering the questionnaires and surveying parents of children with autism spectrum disorders, the obtained results are presented without any manipulation. This research is an applied study in terms of purpose and descriptive-survey in terms of research method, which has been used as a library research method to collect the information needed to compile the research background and its theoretical foundations. (Table1)

Study Population

The statistical population of the present study includes 140 parents of children with autism spectrum disorders. The sample size is 103 people according to the size of the population and based on Morgan Table. The sampling method was a simple random sampling from parents of children with autism spectrum disorder. Of the 103 participants in the study, 68 were female and the rest were male. (Table 2)

Spatial Scope

The spatial scope of this study is parents of children with autism spectrum disorder.

Temporal Scope

The time scope of this research is autumn 2021.

Data Collection Method (field, library, etc.)

Given the fact that this research is a descriptive and applied study, the following methods were used for data collection:

Library method

Library method has been used to collect data regarding the research background and literature. In this method, the researcher had conducted preliminary studies on the subject matter of the research to formulate the theoretical foundations of research and design and development of research tools, which is a questionnaire.

Field study method

A questionnaire was used to collect the necessary data in order to test the research hypotheses from the statistical population and based on it, the results and research methods are presented.

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Initially, library studies, including articles and books, is used to collect basic information and theories on the subject matter of research. Then, in order to collect the data required for hypothesis testing, questionnaires are distributed among the study samples, and then completed in the form of field operations. In this research, questionnaires are used as the research tool.

Data Collection Tools:

Emotional Interaction Questionnaire

This questionnaire was developed by Schutte et al. (1998)(30) based on the theoretical model of emotional intelligence of Salovey and Meyer (1990)(25) and in order to measure adolescents' emotional intelligence. Using factor analysis and principal component analysis of the responses of 316 subjects to 62 items and a scale developed based on this model, Schutte et al. obtained four factors.

Communication Skill Scale

The Communication Skills Scale was developed by Quinn Dam in 2004. This scale was developed to measure adult communication skills. It has 34 items that describe communication skills. To complete it, the respondent must read each item and then rate the degree to which their current situation conforms to its content on a five-point Likert scale, ranging from never to always.

Evaluation of Social Skills Scale

This scale was developed in 1983 by Matson et al. It has 56 items, and the answer to each item is ranked according to a five-point Likert ranging from strongly disagree to strongly agree.

Results

Descriptive Statistics

As it is seen in Table 3 and Figure 2, most of the study subjects were in the 25–30-year-old age group (38.9%) and the age groups of 30-40 years old, over 40 years old and less than 25 years old have the next ranks with 28.6, 19.2 and 13.3%, respectively.

Table 1. Research Method

Type of classification	Status of the present research
In terms of purpose	Applied
In terms of data type	Survey
In terms of time	Cross-sectional

Table 2. Distribution of subjects by gender

Gender	Frequency	%
Male	35	21%
Female	68	79%
Total	103	100.0%

Table 3. Distribution of subjects by age groups

Age group	Frequency	%
Younger than 25	10	13.3
25-30	46	38.9
30-40	36	28.6
Older than 40	11	19.2
Total	103	100.0

Inferential Statistics

Main hypothesis

Emotional interactions affect the social skills of children with autism spectrum disorder.

In the table below, the significance of regression is calculated by F test.

Since in Table 4, the *p* value is less than the significance level of 0.05, so it shows the significance of the regression model of emotional interactions for social skills.

In Table 5, with a glance at regression coefficients (standard and non-standard) and the p value, it is found that emotional interactions can predict social skills. In other words, emotional interactions influence the social skills

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of children with autism spectrum disorder. ($p < 0.05$). Therefore, the research hypothesis is confirmed.

Second hypothesis

Pre-communication skills affect the social skills of children with autism spectrum disorder.

In the table below, the significance of regression is calculated by F test.

Considering the fact that in Table 6, the *p* value is less than the significance level of 0.05, this, therefore, indicates the significance of the regression model of pre-communication skills and social skills.

In Table 7, looking at the regression coefficients (standardized and unstandardized) and the *p* value it is found that the presentation of pre-communication skills can predict social skills. Pre-communication skills affect the social skills of children with autism spectrum disorder ($p < 0.05$). Therefore, the hypothesis is confirmed.

Table 4. ANOVA test to examine the significance of emotional interaction model for social skills

Model	Sum of squares	Degree of freedom	Mean sum of squares	F statistics	*p* value
Regression	18.399	1	18.399	169.487	0.000
Residual	27.790	101	0.109		
Total	46.189	102			

Table 5. Simple regression results to predict emotional interactions through social skills

Predicting variable	Criterion variable	B	SE	Beta	T	*p* value
Emotional interactions	Social skills	0.866	0.067	0.631	13.019	0.000

B: unstandardized regression coefficient

Beta: standard regression coefficient

Table 6. ANOVA test to examine the significance of pre-communication skills and social skills

Model	Sum of squares	Degree of freedom	Mean sum of squares	F statistics	*p* value
Regression	18.399	1	18.399	169.487	0.000
Residual	27.790	101	0.109		
Total	46.189	102			

Table 7. Simple regression results to predict pre-communication skills through social skills

Predicting variable	Criterion variable	B	SE	Beta	T	*p* value
Pre-communication skills	Social skills	0.278	0.044	0.371	6.383	0.000

Discussion

People with higher emotional intelligence in their interpersonal relationships understand

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messages better, have greater listening skills, have more insight into the process of communicating with others, exhibit more determination in their relationships, and they have greater skills in organizing their emotions. In general, these findings are in line with previous studies indicating that the ability to encode, understand, and manage emotions is associated with social and emotional adaptation (31). People with high emotional intelligence have more positive social interactions, value relationships with friends and family, and are more successful in interpersonal relationships (23). For this reason, some believe that employing these people in jobs such as teaching and counseling that require high social interaction is associated with more success than using them in jobs that require administrative and executive tasks. Moreover, social skills, as the most important sign of mental health, are among the topics that have attracted considerable attention in recent decades. Lack of effective social communication can lead to negative emotions, anxiety, and social maladaptation (31). Acquisition of social skills is the main axis of an individual's social development, formation of social relationships, quality of social interactions, social adjustment and even mental health (28).

Conclusion

According to the research findings, it was concluded that emotional interactions affect the social skills of children with autism spectrum disorder. Moreover, it was found that pre-communication skills influence the social skills of children with autism spectrum disorder.

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