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# Investigating the relationship between the dimensions of self-concept and the fear of hospital in children admitted to internal wards and pediatric surgery

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## Abstract

**Introduction:** Introduction: Children's fear of being hospitalized has many complications. The aim of this study was to determine the relationship between the dimensions of self-concept and the fear of the hospital in children admitted to selected hospitals of Isfahan University of Medical Sciences.

**Materials and Methods:** This is a descriptive-correlational study. The research sample consisted of 120 children aged 10-14 years old in Isfahan's selected hospitals. Data were collected using demographic characteristics, self-concept questionnaire (SCQ) and hospital's fear scoring questionnaire (HFRS). Pearson correlation coefficient, linear regression analysis and independent t-test were used to analyze the data.

**Results:** There was a significant negative correlation between the overall scores of fear of the hospital and the overall scores of self-concept and its dimensions except for ethics ( $P < 0.05$ ). However, self-concept scores were not significantly correlated with moral status ( $P > 0.05$ ). There was a significant negative correlation between the age of children with the total score of self-concept and there was no significant relationship between the age of the children with the general score of fear of the hospital and its dimensions. Also, the results showed that there was no significant relationship between the gender of children with general score of self-concept and fear of hospital ( $P > 0.05$ ).

**Conclusion:** As the child's self-concept is more positive, the child will experience less fear.

**Keywords:** Child, Hospital, Self-concept

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## Introduction

From birth, the child begins to grow in physical, cognitive, emotional, and social aspects and evolves in different stages of development (1). One of the areas of personal and social

development for school-aged children is self-concept (2). Self-concept is the overall image that is acquired through social relationships. In fact, by interacting with the people around him and evaluating others about him, a person reaches a

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concept of himself, called self-concept (3). Self-concept consists of different aspects, including social, emotional, physical, scientific, and academic self-concept (4).

When the child goes through the stages of his development, he will face crises; illness and hospitalization may be the first crises a child faces (5). Today, children are hospitalized for different reasons compared to the past two decades. Today, many hospitalized children have serious and serious problems compared to the past. Many of these children have serious injuries and disabilities that have been saved due to incredible technological advances, but they have suffered chronic ailments that require long and frequent hospitalization. Their nature and condition require this group of children to face bitter and aggressive processes when admitted to the hospital.

These factors increase their sensitivity to emotional consequences and show their need compared to other patients. However, without special attention to meet psychosocial and developmental needs in the hospital environment, the harmful consequences of hospitalization for these children may be severe. One of the negative emotional reactions of children hospitalized in medical centers is fear (6). Hospitalization, one of the common fears in childhood, can be one of the five important factors of fear in childhood (1), which many children experience at least once. Research shows that more than 60% of children suffer from negative effects such as nightmares, separation anxiety, and fear of hospitals and doctors (7). Children's fear following hospitalization can be an important factor in delaying the child's recovery, which is a big problem for the family and a threatening experience for the child (8). While these negative effects are thought to diminish over time, and most disappear after two weeks, some researchers have noted very long-lasting effects for some children (7). A child hospitalized in a hospital finds himself in a position of great emotional weakness, and the effects of being hospitalized and staying away from home are more difficult for him than the effects of the disease and treatment itself (9). On the other hand, fear of medical and nursing procedures can hinder the child should cooperate with the medical staff and taking necessary measures (1).

Disease conditions lead to an additional burden of physical, psychological, and emotional threats, especially the development of self-concept in school-aged children. According to the results of the study by Renik and his colleagues, children with chronic diseases and hospitalized in medical centers have a weak mental image and sense of self-worth (10). When hospitalization occurs in school-age children, separation from the educational environment of the school, environmental changes, and separation from the family and peer group can interfere with the normal physical and emotional development of the child, which leads to long-term illness. In school-age children with diseases, separation from family, school, and friends, as well as the perception of their peers, have poor social compatibility, which can cause problems in the development of their self-concept and lack of self-worth in them (11).

According to the researcher's experience in dealing with children and observing the different levels of fear in them during hospitalization and according to the few studies in the field of self-concept dimensions of hospitalized children and their relationship with fear, including the most important negative emotional reactions in children, this research was conducted to determine the relationship between self-concept dimensions and fear of hospital in children hospitalized in selected hospitals of Isfahan University of Medical Sciences.

### **Materials and Methods**

This research is a descriptive-correlation type that was conducted in selected hospitals of Isfahan University of Medical Sciences. The research sample consisted of 120 children aged 10-14 years admitted to the pediatric internal medicine and surgery departments of Imam Hossein (AS) and Al-Zahra hospitals in Isfahan who had entry criteria such as being hospitalized in the pediatric internal medicine and surgery departments of selected medical sciences hospitals in Isfahan, favorable mental and physical conditions of the child to answer the questionnaire, children being in the age range of 10-14 years, no physical and mental disabilities of the child, no history of mental disorders, living with the child's birth parents, obtaining written consent from the child's parents and non-failure

of the children who were treated in the mentioned centers. This research used a three-part questionnaire to collect data, including a demographic data collection form, SCQ self-concept questionnaire, and hospital fear evaluation questionnaire.

Research instruments

A) *Form for collecting demographic information:* It contains questions related to age, sex, the reason for hospitalization, and hospitalization history of the child.

B) *Self-concept Questionnaire:* It has six separate dimensions, from the total of which the overall self-concept score is obtained. This questionnaire contains 48 items, and each dimension has eight items. Each item has five options. The reliability and validity of the SCQ self-concept questionnaire were obtained in a study conducted by Shahmolki, and it was 91% for the total self-concept score, the reliability coefficient of various dimensions was from 67% to 88%, and it was used to determine the validity of the questionnaire according to experts. One hundred questions were given to 25 psychologists to classify them according to different topics. Questions with at least 80% agreement were selected. In this way, the validity of the content and structure of the questionnaire was determined (7).

C) *Hospital Fear Assessment Questionnaire:* This questionnaire is a 25-item instrument that measures a person's level of fear in response to various hospital and medical stimuli. All fearful stimuli are graded on a scale of 1 to 5. The total score was the sum of the scores of these options. Higher scores indicated greater amounts of fear. There was no time limit for the respondent. The reliability and validity of the hospital fear evaluation questionnaire is reported as 0.74 based on Malamed's research. Also, the scores of this scale are correlated with age, the number of disruptive behaviors in the operating room, and days needed for recovery. It has been found that

this tool is sensitive to the measurement of changes during the period of medical care (6).

After making the necessary coordination with the honorable research department and obtaining official permission from him to carry out sampling in the desired centers, the relevant officials were justified after entering the place and explaining the way of work. Then, by examining and considering the entry criteria, sampling was done, and a full explanation was given to the parents and children about the research process. The questionnaire was given to the child to complete, and this process was continued until the samples reached the quorum, and Pearson's correlation coefficient collected the information. Linear regression analysis was used to analyze the relationship between self-concept dimensions and fear of hospitals in children. Furthermore, to analyze the relationship between self-concept score and fear of hospital in children with sex, reason of hospitalization, and history of hospitalization of the child. An independent t-test was used. In addition, Pearson's correlation coefficient was used to analyze the relationship between self-concept scores and fear of hospitals in children of the child's age.

Results

Regarding age frequency distribution, the investigated children (30.8%) were ten years old. Also, the frequency of gender of the investigated children was 56% boys and 44% girls. Most of the investigated children (81.1%) were hospitalized in the internal ward, 48.4% of the children had a history of hospitalization, and 51.6% had not. Also, the relationship between the self-concept score and its dimensions with hospital fear in children is reported in Table 1. There was an inverse relationship between the general score of fear of the hospital and the overall score of self-concept and its dimensions except moral ( $P < 0.05$ ), but there was no significant relationship with the score of self-concept in the moral domain ( $P < 0.05$ ).

**Table 1.** Correlation between self-concept score and its dimensions with hospital fear in children

Dimensions	Total score for fear	
	r	P
Total score for self-concept	-0.005	<0.001
Physical	-0.462	<0.001
social	-0.375	<0.001
Moods and behavior	-0.480	<0.001

Also, the relationship between the self-concept score and fear of the hospital in children's age is reported in Table 2. Pearson's correlation coefficient showed an inverse relationship between children's age and the overall self-concept score and physical, social, mood, academic, and cognitive dimensions ( $P < 0.05$ ). There was no significant relationship between age and the moral dimension of self-concept.

There was no significant relationship between the age of children with the overall score of fear of the hospital and its dimensions ( $P < 0.05$ ).

Also, the average score of self-concept and fear of hospitals by gender of children is reported in Table 3. The independent t-test showed that children's gender had no significant relationship with the overall score of self-concept and fear of the hospital ( $P > 0.05$ ).

**Table 2.** Correlation between fear of hospital and self-concept and its dimensions with children's age

Dimensions	Age	
	r	P
Total score for self-concept	-0.388	<0.001
Physical	-0.309	<0.001
Social	-0.155	0.049
Mood	-0.277	<0.001
Educational	-0.328	<0.001
Behavioral	-0.331	<0.001
Cognitive	-0.288	<0.001
Total fear from hospital	0.148	0.06

**Table 3.** The average score of fear of hospital and self-concept and its dimensions by gender of children

	Male		Female		Independent t test	
	Mean	Standard deviation	Mean	Standard deviation	t	P
Total score for self-concept	171.3	22.6	173.1	19.4	0.54	0.59
Physical	27.4	5.2	27.6	6.1	0.26	0.79
Social	27.8	3.9	27.2	3.4	1.04	0.30
Mood	28.8	5.3	28.7	4.6	0.06	0.95
Educational	30.5	6.3	31.8	5.9	1.28	0.20
Behavioral	30.7	3.6	31.6	3.5	1.46	0.15
Cognitive	26.1	4.9	26.3	4.4	0.21	0.83
Total fear from hospital	55.4	11.9	57.1	11.6	0.39	0.87

**Discussion**

This research was conducted to investigate the relationship between the dimensions of self-concept and fear of the hospital in hospitalized children, and the results obtained from the research showed that the self-concept of the studied hospitalized children had an inverse relationship with the fear of the hospital in all dimensions except the moral dimension. In other words, with a stronger self-concept, the child will experience less fear of the hospital.

Furthermore, many studies have investigated the relationship between different dimensions of self-concept with fear and anxiety and have

obtained results consistent with the present study (2,12-14), and no study that has a result contrary to the results of this study was found. The results showed that the average score of self-concept dimensions is 127.5.

According to the questionnaire, this average shows a good self-concept in the children tested. In this connection, the results of Shahmolki's study showed that the overall average score of students' self-concept dimensions is evaluated as good. Also, the results of Kulkarni's study show that the self-concept of the studied children is good and natural, and the present study is in line with these studies.

Also, the results showed a significant and inverse relationship between the average score of physical self-concept and the overall score of fear of the hospital. In this regard, the research results of Tomaj et al. and Martin et al. are consistent with the present study (16,17). In explaining the obtained results, it can be stated that due to the fear of the physical nature of the disease in school-age children, this category of children may pay less attention to pain and think more about disability, doubtful recovery, or possible death. Also, considering the importance of various diseases at this age and the possible injuries in the treatment, lifelong consequences, permanent damage, or loss of activity following the disease (2), it follows the fear of negative evaluation by others. In this way, the connection between the physical dimension of self-concept and the fear of the hospital in children is justified.

Also, the results show a significant and inverse relationship between the social dimension and the general score of fear of the hospital. In this connection, Saban and Arikan's research showed that children who receive adequate social support would have more self-esteem and less anxiety (18). Also, Erfan Parast et al.'s research showed a significant relationship between children's behavior and anxiety and their self-concept (19). In other words, with less anxiety and higher self-concept, children's behavioral feedback also improves. In explaining the cause of the obtained results, it can be said that according to the definition of the social dimension, which refers to the feeling of personal value in social interaction and behavior, with the child being in the hospital environment and entering an unfamiliar environment on the one hand, and also being in, on the other hand, fear and subsequent disturbance in social self-concept can be expected in situations where one may be separated from one's parents.

The results showed a significant inverse relationship between cognitive self-concept and children's overall fear score. In this regard, the results of the research of Shah Mohammad Erip et al. showed that the participation of adolescents in cognitive behavioral therapy sessions led to an increase in the self-concept of adolescents and its dimensions, as well as an increase in optimism, a sense of self-confidence and having a positive

outlook in the face of failure (20). According to the definition of the cognitive dimension of self-concept that a person's awareness of his intelligence is his ability to solve problems and his judgments and that sometimes fears are caused by non-adaptive cognitions and can be overcome through cognitive-behavioral treatments (such as teaching problem-solving methods, educational self, self-management) in which changes in anxiety behaviors are addressed through the correction of non-adaptive cognitions (21) explained the relationship between the cognitive dimension of self-concept and fear of the hospital and stated that the more a person knows, and the stronger cognitive dimension is related to less fear and anxiety.

The results showed no significant correlation between the score of moral self-concept and the general score of children's fear. To explain this result, it can be said that because school-age children often see illness or injury as a punishment for an act, and on the other hand, the moral development of school-age children is such that the point of view of others is the basis of their judgment. (2) It can be concluded that the behavior of the people around them (parents, companions, etc.) is effective in the judgment of children, and perhaps this difference in the behavior of the people around them has become an influential factor in the moral self-concept and lack of meaning in the relationship with the fear of the hospital. The results show a significant and inverse relationship between self-concept score, mood, and overall fear score. According to the definition of the mood dimension of self-concept, which is a person's perception of the usual emotional state or mastery of a certain type of emotional reaction, the close relationship between depression and this dimension of self-concept can be justified according to the results of Najafi et al.'s study entitled "Stress, anxiety, depression, and self-concept of students". They concluded that depression, fear, and anxiety have a significant relationship with self-concept, which is in line with the results of the present study (14). The results showed a significant and inverse relationship between the academic self-concept score and the overall fear score of children. The results of Ghaffari et al.'s study showed that the correlation of academic self-concept variable with fear and exam anxiety is

negative and significant, which is in line with the results of the present study. In order to explain the result obtained, it can be said that although each dimension of self-concept is related to certain behaviors and emotions, such as close and close relationships with the academic dimension and exam anxiety, studies such as Ghaffari and colleagues show that people who Their capabilities, especially in the academic and educational dimension, have a positive and constructive perception and knowledge. Such perception and thinking can obstruct unwanted thoughts and actions in all areas of life, such as hospitalization (12). Also, the results show that children's gender has no significant relationship with the hospital fear score and its dimensions. The results of the study by Suprabha et al. (22) are consistent with the present study. Although there are many studies (23-26) that confirm the significant relationship between fear and gender and it is not consistent with the present study, in this study, the mean score of fear of the hospital and its dimensions in all cases is higher in girls than in boys, despite it is not statistically significant. The best explanation for the difference in the amount of fear between girls and boys is related to biological factors (genetics and hormones) and social factors (25). Also, the results show that children's gender had no significant relationship with the overall self-

concept score and its dimensions. The results of the study conducted by Ghaffari et al. (12) are consistent with the present study.

People judged themselves based on it, which caused a difference in the concept of men and women in society. Most psychologists believe that the concepts of men and women are fundamentally different. In their definition, men emphasize uniqueness more, while women's self-schema emphasizes connection and dependence with others. Cultural, social, and family factors may cause differences in boys and girls in forming self-concepts and attitudes. Compared to boys, girls benefit from lower self-perception and self-concept, and this difference is caused by cultural and social stereotypes (7,27).

### Conclusion

The study results show a relationship between the child's fear of the hospital and the dimensions of self-concept, and the more positive the child's self-concept, the less fear he will experience. Therefore, paying attention to the child's attitude towards himself, the conditions he inevitably experiences, and his mental state should be checked with more sensitivity and importance by the treatment staff upon the arrival of the hospitalized child so that a more successful treatment process for the child can be made in this way.

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