

# Play model for “evaluation of self-concept of children with cancer”

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## ABSTRACT

**Background:** Childhood cancers are fatal diseases which cause intense stress and traumatic situations for the ones who experience those diseases. This kind of an emotionally hard life may create some hardships for developing self-concept. The aim of the study is to put forth the self-exposure of a school-age child by using plays.

**Materials and Methods:** Six play sessions had been carried out in June–August 2011. As a searching pattern, interpretive case study method was used. The research consisted of six children with cancer, aged between 9 and 12 years. The research was conducted in a public hospital in children oncology service.

**Results:** The assessment of data was realized in two stages. The first one was examining the data; the other stage was the content analysis that has been constructed after the play sessions as “Nursing Intervention: Play Model.” In the newly formed model, nine themes had been found: (a) expressing good memories, (b) control, (c) problem-solving ability, (d) relations, (e) aggressive behaviors, (f) regression, (g) good–bad, (h) trauma, and (i) anxiety.

**Conclusions:** The self-concept of the school-age child needs to be supported. It has been submitted that the themes can be supportive for the prospective nursing models concerning child’s self-exposure. It has been suggested that the themes produced by “Nursing Intervention: Play Model” can be used while planning, implementation, and assessment of the nursing care.

**Key words:** Case study, child, child with cancer, nursing, nursing care, play therapy, oncology, self-concept

## INTRODUCTION

The self-concept of a child affects his/her reactions to specific situations and it is a crucial determinant of the child’s behaviors. A school-age child with a healthy self-concept can keep his/her relations and behaviors under control toward other people. The development of self-concept can be obscured by diseases and self-image in social, cultural, and emotional areas. This situation leaves children and their families at an increased risk of developing both short- and long-term psychosocial problems.<sup>[1,2]</sup> During childhood, having a chronic disease like cancer might obscure both social and emotional development of the children and affects their physical development in a negative way. Children with a chronic illness may refuse to continue their education, and feel having a low self-esteem, lack of confidence, pain, and hopelessness. Moreover, it is observed

that they may also have the feeling of anxiety regarding how to react toward their peers.<sup>[3]</sup> In a child with cancer, problems in learning and retardation in his/her growth and development can be seen in the long term.

When the nurse forms a conceptual framework of both theoretical and methodological by using the child-centered plays, she plays a role in a multi-professional team in order to keep the child healthy.<sup>[4]</sup> Child-centered plays facilitate the development of self-concept and encourage the child to design his/her own behavior patterns. Child-centered plays might be implemented in children with “depression, obsession, behavior problems, perception problems, or any other chronic diseases.”<sup>[5,6]</sup> Frankenfield emphasizes in his case report that includes a child with retinoblastoma that the play method applied by the nurse has a reducing effect on the child’s anxiety level.<sup>[7]</sup> In another randomized controlled study, it is reported that the play method applied

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the nurses has a therapeutic effect on the child's anxiety state.<sup>[8]</sup> Pan *et al.* have presented the play of the nurse as a case report which is about the ileostomy care of a child with intestinal obstruction. After the research, the conformity level of the child increased because of the fact that he accepted the care process as a play.<sup>[9]</sup> Chan and Dai found that during the nursing care of a child who has undergone liver transplantation, plays have increased the communication and made it appropriate for treatment protocols.<sup>[10]</sup>

The behaviors that occur as a result of the effect of emotions on the self-concept of a school-age child with cancer show his/her coping abilities with the disease. In the child-centered play approach, a systematic way is followed in order to understand the child's experiences, assess his/her self-concept, and obtain therapeutic results. The researcher used the play as a tool in order to determine the exposure areas of the child's self-concept. Moreover; a model is established by the themes related to these exposure areas. The research, using an interpretive approach, comes out with child-centered play model.

Following the literature search which was carried out, only one study by Linder and Christian<sup>[11]</sup> was found using multiple-case study method. At the end of the study, it was found that nightsleeping of the school-age children with cancer was affected by a number of factors, especially the noise level in the environment. In the literature, any investigation on the self-development of school-age children with cancer was not found using the case study. This qualitative case study was carried out to evaluate the effect of the cancer on self-concept of a school-age child.

The case was considered in the light of these basic questions:

- How does cancer affect the self-concept of a school-age child?
- How do the play sessions affect the self-concept of a school-age child with cancer?

## MATERIALS AND METHODS

### Research design

The research was conducted to identify the self-concept of the children. In this research, case study design was selected as the qualitative method. The ethics approval of this research was taken from the Ethics Committee of the University of Marmara.

### Participants

Determining adequate sample size in qualitative research is ultimately a matter of judgment and experience in evaluating the quality of the information collected against the uses to which it will be put, the particular research

method and purposeful sampling strategy employed, and the research product intended. Sample sizes may be too small to support claims of having achieved either informational redundancy or theoretical saturation, or too large to permit the deep, case-oriented analysis that is the *raison d'être* of qualitative inquiry.<sup>[12]</sup> The research consisted of six children with cancer, aged between 9 and 12 years. The research was conducted in a public hospital in children oncology service. Sample selection included both typical case and homogeneous sample methods, which are the subgroups of purposive sampling used in qualitative studies.<sup>[10]</sup> Six play sessions were carried out between the months of June and August, 2011. Typical case selection concerning the children with cancer was made. In addition to that, homogeneous case selection was made for these selected children, whose ages were between 9 and 12 years [Table 1].

### Data collection

At the beginning of the study, required permissions were taken both from Marmara University Ethics Committee and from children's families. The data was collected in the "the child-centered play sessions."

Play sessions consisted of three phases. After each session, verbal approvals related to the themes of the play were taken from the nurses and the families. All the sessions were recorded with a camera which was placed in the play room by the researcher. Both the family and the child were informed about the camera beforehand.

In the first session, the child and his/her mother played together. The researcher observed the relation between them and assessed the domestic communication patterns. Setting plays, instructions and finalizations between the children and their mothers was observed. In the second session, the child and the researcher played together and the child was expected to draw the picture of his family. Drawing technique was used to observe the child's assessment of his domestic relations. Finally, the researcher played with the child for six sessions. The interview lasted between 30 and 45 min. Research continued until data saturation was achieved.

### Data analysis

Evaluation of the data was realized in two stages: Establishing data sets obtained in the play sessions and content analysis.

In the first stage of the analysis, the collected data were put into written form. After that, directed content analysis, which is one of the qualitative research methods, was used to interpret the data. Content analysis included four

**Table 1: Descriptive characteristics of children and families (N=6)**

Children	Characteristics of children and families								
	Age	Disease	Duration of illness	Hospitalization experience	Father's age, years	Father's education	Mother's age, years	Mother's education	Sibling
Child D	9	Neuroblastoma	February 2009	No	41	Primary school	40	Primary school	2
Child E	9	Ewing's sarcoma	May 2011	No	31	Bachelor's degree	31	Bachelor's degree	1
Child F	9	Wilms' tumor	May 2010	Yes	43	Primary school	40	Primary school	No
Child H	11	Osteosarcoma	April 2011	Yes	39	Primary school	36	Primary school	3
Child S	10	Osteosarcoma	December 2010	No	37	High school	35	High school	1
Child U	10	Osteosarcoma	June 2011	No	36	Primary school	34	Primary school	1

phases as follows: Encoding of data, finding related themes, organization of these codes and themes, and interpreting the codes and themes. During the content analysis, the data from within the data sets were firstly encoded by the researcher with the help of an encoding program called as NVivo.

After the encoding process, the codes were categorized according to related themes in an attempt to find the related themes. Main themes were determined with the information from the literature which the researcher had examined beforehand. In the process of encoding and constituting themes, in order to provide the reliability of the research, comparison of the encoding and constituting themes was made by the researcher and by another expert with the same processes. Therefore, the data sets were delivered to another expert in order to be encoded. The findings were compared with the researcher's encodings and theme constitutions in terms of the differences and similarities. As stated in the literature, if the reliability level was below 70%, encoding and theme generating processes would be re-assessed by the researcher.<sup>[13]</sup>

### Methodological rigor

Case study was applied to this research since the case was observed within real-life situations without changing or controlling the variables. The unit of analysis was school child with cancer diagnosis in the hospital. The approach used in this research was to match information in theoretic proposal with the research data.

The aim of the interviews conducted with mothers and that of the play sessions was to increase the level of "external validity." Furthermore, it was tried to be based on self-theory in order to provide external validity in this study. Mothers' and nurses' meeting after every three sessions might be considered to be helpful for providing the construction validity of the study.

A camera was placed inside the play room to ensure the reliability and provide conformity between the observers.

In the study, observation and interpretive quality methods were applied. The data were inclusively collected by using scales and play methods to make sure that they reflected the views of the participants and ensure the reality of interpretations. Therefore, the data and method variety occurred throughout the study.

## RESULTS

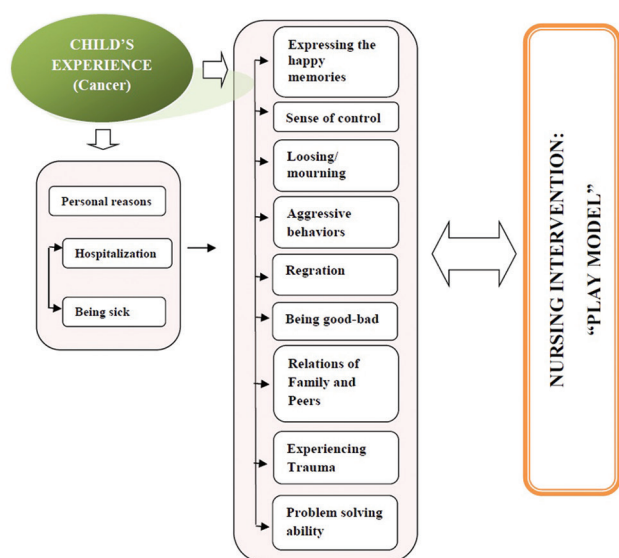
The basic concepts of the affected self-concepts of the children with cancer who were included in the scope of the research were obtained with the content analysis that was carried out. Models and themes which were shaped after analysis are presented in Figure 1.

### Theme 1. Expression of happy memories

Children's expressions on happiness and satisfaction were directly related with their experiences. D's expressions oriented toward happiness included the experiences of his healthy times. He also stated that he felt happy with the play sessions. The feeling of "satisfaction" derives from the feeling of "control." H's happiness expressions were due to his mother's being with him. H, who is a school-age child, reflects his feeling of "control" by playing mother's role during the play. S, on the other hand, attaches his happy memories to his healthy experiences. S also implies that his happiness is due to the comfortable environment provided by the play sessions. It was found that happiness scores of all the children increased after the play sessions.

### Theme 2. Sense of control

All children who participated in this research had a number of behaviors and these behaviors revealed that their diseases posed an obstacle to their feelings of control on their own behaviours such as dining and walking. In addition, they all formed sentences such as, "mom sometimes feed me," "sometimes I do not want to eat anything," "I can walk by myself indeed, but my mom carries me in her arms," etc., H, who is a schoolchild, had made an endeavor about the feeling of control by playing a role as a mother. When the plays were taken



**Figure 1:** Nursing Intervention: Play Model

into consideration, it was obvious that all of the children experienced the feeling of “losing control” since they were unhealthy.

### Theme 3. Losing/mourning

Four of the six children participating in the research had expressed their fear of “losing experience” just because of their diseases. For instance, they uttered expressions such as, “*If the tumor is not taken, your leg is going to be cut,*” “*I cannot go to school when I am admitted to the hospital,*” “*If I am not treated, I will die,*” etc., H felt anxious because he thought that he would lose his leg due to his illness. S reflected his feeling of “anxiety” during the play by stating “*the baby doll will lose her arm*”. U also expressed his feeling of “anxiety” about losing one of his organs. Also, F thought that he may lose his life because of the tumor.

### Theme 4. Aggression

Children played a kind of war play using the dinosaurs, which are classified as “aggressive toys.” While playing with dinosaurs, D attacked the livestock. S wanted to afflict his toys. Moreover, during the session in which he played with his mother, he gave an injection to his mother continuously, even though he knew that it gave pain to his mother. In addition, U made the dinosaurs fight with each other. Their expressions on that theme are related to their having a chronic illness.

### Theme 5. Regression

Four of the children (D, F, E, and U) showed regressive behaviors and uttered expressions such as “*I am a little child so my mom cooks for me,*” “*I cannot go to school on my own,*” etc.

### Theme 6. Being good/bad

During the play, H identified the concepts of “good–bad” by way of an individual’s behaviors. He expressed that the outcome of “being good” was a reward. On the other hand, S assessed the state of “being good” as a characteristic of human beings. He believed in the idea of “*good people always win.*” F explained these concepts by way of success at school.

### Theme 7. Relations of family and peers

During the plays it was observed that two of the children (F and H) expressed their family relations and one of the children (S) talked about “peer communication.” Four of them (D, H, U, and S) talked about the relation with their siblings. Researcher observed that children complained about their relations with the healthy siblings getting deteriorated due to the hospitalization process. They also indicated that their relationship with their families and peers was getting worse because of their chronic illnesses.

### Theme 8. Experiencing trauma

Girls especially stated that they had long hairs before the treatment, but they do not have it now. Nevertheless, it is not a problem for them since they knew their hair would get longer after the treatment.

All the children played doctor’s role and they enlived traumatic events during the play.

### Theme 9. Problem-solving ability

Six children participating in the study had received only chemotherapy. They were asked to join the plays before getting radiotherapy since it affects their mental state. The researcher observed that the problems were handled by the families and the children did not encounter any problems during their hospitalization.

## DISCUSSION

It is considered that although the children experience the feeling of “losing control,” there is an effect of the assuring environment provided by the plays on their expressions of happiness. Communication between the child and the nurse was ensured with the help of play sessions and the therapeutic dimension of the communication was, therefore, used. Furthermore, it is considered that the play environment provided by the researcher makes the observation of the concepts which are related with happiness and satisfaction possible.

The disease and admission to the hospital can hinder the independence, relations, and some of the school activities which are very valuable for the school-age

child.<sup>[14]</sup> In their study, Theunissen *et al.* indicated that 36% of the 32 palliative children felt as if they would lose their independence.<sup>[15]</sup> During the plays, all children played with their mothers. Some of the children, whose names' initials are D, F, E and H, played in accordance with their mothers' instructions, and this means that these children might represent the feeling of "dependence." The longing of S for his/her school shows that he/she missed the feeling of independency.

Some researchers state that children might express negative feelings such as fear, anxiety, irritation, and agitation due to their admission process.<sup>[16-18]</sup> In another study conducted in Hong Kong with participation of 7–12 year old children and their families, effectiveness and applicability of therapeutic plays were assessed. Results of the study showed that experimental group children got reasonably lower anxiety scores than those in control group.<sup>[19]</sup> In their study with 32 palliative children, Theunissen *et al.* (2007) concluded that 32% of the children had a sense of "losing."<sup>[15]</sup> In our study, S, F, H, and U's expressions – while playing doctor's role – can be accepted as a reaction to hospitalization process and their illnesses as well. It can also be considered that the expressions of U and S of "losing an organ" might be the result of the "anxiety" they felt.

According to reports of the American Psychiatry Association, children with cancer are under the risk of Post-Traumatic Stress Disorder.<sup>[18,20]</sup> The regressive behaviors of U, E, and F can be accepted as a defense mechanism toward the factors causing stress.

According to Theunissen *et al.*, 65% of the children with cancer experience the feeling of "sadness."<sup>[15]</sup> In their study, Matziou *et al.* examined the psychiatric problems occurring during the processes of diagnosis and treatment including 80 children with cancer and 84 healthy ones. They concluded that depression symptoms were reasonably different for the sick children.<sup>[21]</sup>

Children's preference of "aggressive group toys" such as dinosaurs and continuously playing aggressive plays with them may indicate that they have aggressive behaviors.

In the relation theme, including child's family and peer relations takes place. Since the family and peer relations are considered as a whole by school-age children, "relations theme" has been taken into consideration as a whole in the section "Discussion."

In a research carried out by Yilmaz *et al.*, it has been stated that 43.8% of the children's study activities, 39.3% of the

children's friendship, 36% of the children's play activities, and 28.1% of the children' family relationship were highly affected by their cancer fatigue.<sup>[22]</sup> It is compatible with the literature that children recall their schoolmates and healthy siblings. In our study, when the states of children and their families were assessed, it was found that admission to hospital and having cancer also affected the family communication. Since the child cannot see his/her father and healthy siblings, the child can perceive this issue as a problem. Nurses who are implementing "Nursing Intervention: Play Model" in the playroom might probably cause the child to feel worthy.

The reasons for the distress observed in the children can be the traumatic processes, disorder of daily routines, cosmetic changes, neurologic symptoms, and fear of death.<sup>[20]</sup> Long- and short-term traumas related with cancer might cause emotional, social, and psychological problems. Varni *et al.* examined the relation between psychical change due to cancer and its treatment and social problems in their study and found that that physical appearance affects the child him/herself indirectly since it causes depressive symptoms and social anxiety.<sup>[23]</sup> In another study including 13 children with leukemia, the body image scores of the children were found to be fairly lower than those of healthy ones.<sup>[24]</sup> In the multiple-case study of Larouche and Chin-Peuckert including five adolescents, children expressed that they were "not normal." When the theme was examined, they stated that the reason why the children did not feel themselves as "normal" was due to the loss of hair and presence of intravenous catheters.<sup>[25]</sup> Theunissen *et al.* stated in their study that 31% of 32 palliative children expressed that they were afraid of physical diseases.<sup>[15]</sup>

Girls participating in the research expressed their sadness about losing their hair. In addition, the children participating in the research had expressed their operational fears during the plays. During the plays, they chose legs of the toys as the operation zone, indicating their fear of losing their legs. The idea of losing one of their visible organs is perceived as a stressor by them. Girls' hair loss due to the treatment process might be a cause of trauma for them. The implementation of the play is thought to provide the supportive environment for the children to express their feelings.

In their study, Hampel *et al.* found that children with cancer are more successful in problem-solving against daily stressors, compared to the healthy children. The reason of this is explained as their ability to easily apply the knowledge they acquired from the intense stressors they had experienced to the daily stressors.<sup>[26]</sup>

## CONCLUSION

Children's unwillingness in solving the problems that they encountered during the play sessions has showed that they did not use their problem-solving skills during the play sessions. However, it is observed that they are successful in establishing cause-effect relation, suitable for their ages. As a result, since the nurse develops a confidential communication with the child, and supports and provides an acquiescent environment for him/her, s/he exhibits a supportive and self-developmental behavior. It is considered that "Nursing Intervention: Play Model" is a proper tool for planning and implementing nursing interventions, since it facilitates communicating with the child and helps to determine the emotional reactions related with the disease and to handle the hospitalization process.

The researcher recommends similar studies to be conducted in future with a larger and randomized group. Besides, the required data should be gathered and the child-centered play model should be implemented during the nursing care process.

## Study limitations

Having a narrow research sample and using a qualitative method create some limitations about the generalization of the results. Because of the limited sample, some concepts, which the child with cancer may encounter, could not be studied.

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