IJBPAS, July, 2015, 4(7): 1040-1048

ISSN: 2277–4998

International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS)

'A Bridge Between Laboratory and Reader'

www.ijbpas.com

EFFECT OF PLAYING ON THE REDUCTION OF PAYING ATTENTION TO PAIN AND ANXIETY IN HOSPITALIZED PRE-SCHOOL CHILDREN

ALIREZA JAFARI

Department of Psychology, Abhar Branch, Islamic Azad University, Abhar, Iran

E Mail: PersianARJ@yahoo.com

ABSTRACT

Humans have different kinds of needs in different levels' of their lives which have to be fulfilled (at least partially), because their satisfaction causes humans to get through his/er course of revolution more naturally. A child needs physical movement and brain activity in different stages of his/er life which can be provided mostly by games(or playing) (translated by Mofidi, 2011). Sometimes parents use playing to calm (slow) down their child, while games influence development of their child's personality; and opens his/er mind to future problems and offers him/er better understanding of real life which is more than his/er games and dreams. While playing, a child will find issues which are re-emphasized by his/erparents for several times but s/he could not get them; whereas facing and playing these issues with a group of peers will have more effect on him/her.

INTRODUCTION

A child plays few hours of a day; and, playing offersadultsa unique chance to see world from that child's eyes [2]. Playing cannot bethought; rather it is a kind of culture experimenting. In other words, as the child plays, s/hemovestoward his/er society's culture. An infant adjusts himself/herself with new environment via sensory-motor activities, and then in childhood s/he tries to have place in adults' world by playing, growing and physical and mental evolution. [3]

While future of each society and country depends on their children, paying attention to children and their problems should have priority to other issues. One of the problems that a child faces in his/er life is

hospitalization. Hospitalization is a social tension and adoption with new environment for a child, while not only s/he does not have physical health but also this child will face unknown and dangerous factors [13]. Hospitalization always has significant effect on child's life. When a child goes to a hospital, s/he encounters different sounds, smells, lights and conditions and if there is a negative effect, s/he will not accept the treatment. If a child have a chronic illness or s/he has to be hospitalized for several times but his/er physical, emotional and mental needs are not stimulated, then his/er evolution and progress will be damaged.

So many researchers studied the role of playing and game therapy on hospitalization of children. In his studies on 14 hospitalized children, Lerwick (2011) showed that child-oriented game therapy has effect on the reduction of children's anxiety level before surgery and their preparation for surgery. In a survey on 203, 7-12 year old children, Li and Lopez (2008) showed that game therapy has significant effect on preparation of children for surgery. In a research Jones and Landereth G (2002) illustrated that game therapy has great effect on diabetes and reduction of persistent over accepting the related regime. In a research named "reviewing game therapy", Carrol J (2007) studied the effect of game therapy on accepting hospitalization and different ways of showing emotions while playing; and also he illustrated that each child shows unique emotions as playing freely while they are hospitalized. In another research, Barati et al (2011) showed that game therapy as a nursing intervention for school aged children has positive effect on reduction of pain after surgery. In a research, Hamed Tavasoli (2008) illustrated that familiarity reconstruction and distraction of mind influence the reduction of pain and anxiety resulted by children's injection procedures and increment of parents' satisfaction. In a research named "studying the effect of playing intervention before surgery on anxiety after surgery on 75, 5-12 year old children", Mahmoudi Gharai et al (2008) came to conclusion that going to playing room and playing games can reduce children 's anxiety level caused by surgery. In a semi-experimental research on 60, 9-12 year old children who were hospitalized, Kazemi Malek Mahmoudi et al (2007) showed that playing music for hospitalized children can reduce their anxiety.

According to the mentioned researches which show that while hospitalizing a child, we should consider emotional and mental needs in addition to physical cares for that child: in this research we study the effect of games on

pre-school children's recovery in hospitals located in Ghazvin province.

METHODOLOGY

This research is a semi-experiment pre-test post-test plan with a witness group. We used this plan to study the effectiveness of games on reduction of anxiety and paying attention to pain in pre-school hospitalized children. In doing so, 30 children between 4-6 years old who have been hospitalized in hospitals of Ghazvin have been selected by multi-stage random sampling as the sample group. The procedure was as follows: first, we chose two hospitals in Ghazin province, second, we selected 30 hospitalized children as the sample group and then randomly divided them to two witness and experiment groups. The sample group consist of 19 boys (63.3%) and 11 girls (36.7%). The measuresfor choosing the sample group were as follows: being 4-6 years old, having mental and physical health and enough consciousness which will not create barriers while doing the research, accompaniment of one of the parents while hospitalizing, at least 30 days of hospitalization, having no more than 3 times of hospitalization, having no surgery in this hospitalization, not using anxiety reducing medicine (which have been checked with nurses).

In order to examine the effectiveness of games in reduction of anxiety and paying attention to pain in children: we used demographic information questionnaire, self-rating tool for children's clinical fear, Imagetest anxiety"Peyary" and pain measurement in children (scaled glasses).

The content of questionnaire was information including age, gender, family members, birth rank and parents' educational level.

Self-rating tool for children's clinical fear consists of four categories: fear of treatment processes, fear of environment, interpersonal issues and external issues which are completed by the kind of child's fear. This tool has the scale of 0 to 2. Each category has been studied separately, then all of them were added together and the total score of fear was calculated. The range of the scale is from 0 (least) to 2 (most) and we asked children to mention their fears in hospital. Ravani pour (1999) used retest method to examine the reliability of this tool and the test reliability was equal to 93%. thereliability of this tool has been examined in this research, also. We presented the tool to each participant after one hour and by using the Pearson's correlation coefficient the reliability was 92%.

Imagetest anxiety"Peyary" comprises of 7 cartoon face paintings that each of themhas a

number and this number will make a scale of 1 to 7. The participant will choose one of these pictures as his/er current condition. Face number 1 is an angry one but face number 2 to face number 7 show the increase in anxiety level. First we asked them: which one are you? And then the child chose a proper face for him/herself before and after playing.

In a research, Ravani Pour (1999) examined the reliability of this tool with equivalent method and declared it is equal to 95%.

In measurement of pain in children (scaled glasses) there were 6 glasses with different levels water. First we asked the child which water glass shows the level of his pain. Then the child selected one of the glasses. Glass number 1 has angry mode and glass number 6 has the highest scale.

After selecting the sample group, the researcher introduced himself and the aim of the research to the children and their parents, and then he completed the demographic information questionnaire as interviewing with of the accompanying parents. hence, to specify the fear factors in children, the questionnaire was completed via interviewing with the child, and according to it (data gathered from clinical fears) the type of game has been determined for each child. After that, the anxiety image tools and examining pain tools were implemented before intervention of playing in the experiment group. Each playing plan was designed for the experiment group according to the fear factors in children and considering age, gender, and hospitalized child's condition. The playing plans were 4 session of 30 minutes playing which have been implemented in second, third and forth days of hospitalization. The researcher completed the needed information for anxiety image tools and examining pain tools in the fifth day of planning with the help of each child again. at the end, the difference of meansof pre-test and post-test in experiment and control groups have been analyzed with the proper statistical method and software.

FINDINGS

The data has been analyzed with descriptive statistic method and "t" student test and covariance analyze test using software. The findings of analyzing data showed that playing and toys reduce the anxiety and pain in experiment group in comparison with control group. Also other findings showed that games and toys reduced the clinical fears in pre-school hospitalized children.

As you can see in table 1, the mean of pre-test for the anxiety variable in experiment group is 2.2 which is less than mean of participants for post-test in control group for this variable which is 4.1.

As can be seen in table 2, the mean of post-test for pain in experiment group is 2.8 which is less than mean of participants' scores in post-test in control group for this variable which is 3.7.

According to the table 3, because the meaningful (significance level) level is less than 0.01, so the zero hypothesis is rejected and the opposite hypothesis is confirmed with 99% certainty. Therefore, with 99% certainty, we can conclude that there is a meaningful difference between compared means.

According to the confirmation of opposite hypothesis and gathered data, with 99% certainty, we can conclude that there is a meaningful difference between anxiety variables in experiment and control groups. In other words, playing and toys (game therapy) could influence anxiety in experiment group.

To assess the stability of the effect of playing and toys (game therapy), we deduced the scores of pre-test and scores of tracking in both groups and "t" test was implemented for both groups' scores. As we can see in the table (sig = 0.000), there is a meaningful effect between the pre-test and tracking scores. Therefore, we can conclude that playing and toys (game therapy) has effective stability for pain variable.

Table 1: Mean and standard deviation in participants' scores in experiment group, control and tracking the anxiety variable

Variable	group	No.	Pre-test		Post-test		Tracking	
			mean	Standard deviation	mean	Standard deviation	Mean	Standard deviation
Anxiety	control	15	109.90	14.440	108.25	14.138	108.05	13.866
	Experiment	15	109.05	14.296	103.30	13.358	102.92	13.991

Table 2: Mean and standard deviation of participants' scores in experiment group, control and tracking pain variable

Variable	group	No.	Pre-test		Post-test		Tracking	
			mean	Standard deviation	mean	Standard deviation	mean	Standard deviation
pain	control	15	291.70	56.706	294.65	57.854	295.50	56.565
	Experiment	15	293.70	61.886	312.20	61.133	313.35	62.400

Table 3: The results of studying covariance analysis for anxiety variable

Scale	Variance source	Sum of squares	Freedom degree	Mean of squares	F	Meaningful level
anxiety	Pre-test	13.2	1	3.2	1.58	0.000
	Group	3.6	1	3.6	10.35	0.000
	Error	3.7	29	1.2		
Corrected total	15.2	29				

Table 4: Studying the stability of playing and toys (game therapy) effect on participants' pain

	Mean	Standard deviation	Standard deviation error	Least	Most	T	Df	Sig
Pre-test tracking	6.8	2.4	0.9	3	8	3.2	14	0.000

DISCUSSION

Unknown matters always make us nervous and stressed and especially hospitalization is a big problem for families and threatening experiment for the child who does his best to gain the responsibilities of reaching evolutionary level [4]. According to Taylor the reason of anxiety caused by hospitalization includes child's separation from known matters and experiencing unknowing matters, separation from family, going to new bed, unknown food on unusual time, and painful medical tests and personels' dresses. According to Ashwill and Droske (1997) light, special sounds and even the smell of hospital can make the child anxious. Most of the children feel anxious while hospitalization[10]. The child who is hospitalized , apart from his illness and its degree will face a terrible blow in the first step of hospitalization; and this created anxiety causes the exacerbation of the disease and slows down the recovery. According to Seligman, the more the anxiety level of the child, the longer his hospitalization and usage of medical services. In one hand, this will pose high costs to health systems and child's family and on the other hand because of long hospitalization, the dues and infectious diseases will threaten the child and his family [11].

According to this information, it is necessary to find a way which is compatible with the child and his parents logically and effectively. According to the role of playing and toys over children's mental and physical health and lack of this kind of attention in hospitals, in this paper we tried to study playing and toys and their effect on the recovery of hospitalized pre-school children in Ghazvin province hospitals (i.e. while the child is far from his family and children's problem of adaptation of with environment of hospital).

The results of this research showed that playing and toys caused improvement of pre-school children's health in Ghazvin province's hospitals.

The result of this research is in line with: Lerick's researches which show that child-oriented game therapy is effective on reduction of children's anxiety level of before surgery. Jones E. and Landereth G. (2002) paid attention to the effect of game therapy on accepting the hospitalization process and different ways of expressing emotions while playing. he illustrated that children show different unique feelings while playing when they are hospitalized. Also the results of Baraty's research (2011) showed that game therapy as a nursing intervention has positive effect on reduction of pain after surgery in pre-school children. Mahmoodi Gharai et al

(2008) showed that going to playing room and playing games can reduce the increment of anxiety level caused by surgery in children. Yaghubi's research (2005) came to conclusion that playing causes significant reduction in anxiety level of hospitalized children.

Finally, according to the results of above researches which are in line with the result of this research and in other words, they confirm the result of our research, we can say that playing and toys (game therapy) reduces the anxiety and pain and generally cause improvement in children's conditions. some of the barriers of this research include the personal differences of selected children and their mental and spiritual characteristics while facing tension and stress of hospitalization, cultural differences between samples which are effective for facing pain, illness and hospitalization; children's and parents' personal differences; specially parents' anxiety that influences children, non-cooperation of some of these children and lack of time. it is suggested that in future researches, scholars study the effect of playing on anxiety level of children who are hospitalized in insolated rooms, bed rest and special sections. Also there can be researches over the effect of playing on child's reaction after discharging from hospital and the effect of factors like age, gender, number of sisters and brothers and hidden anxiety can be studied and compared.

REFERENCES

1. Angajy.LPlay constitutes Painting, Volume 5.[Persian]..(2005).
2. Baratee,F.,Dabirian,A.,Yoldashkhan, M.,Zaree,F.,Rasouli,M.Effect of therapeutic play on postoperative pain of hospitalized school age children in pediatric surgical ward. Journal of Nursing and Midwifery, 21 (72), 25-28. [Persian].(2011)
3. Carrol, J. Playtherapy: the children views. Child and family social work. New York: w.w. Norton & Company.177-187. (2002)
4. Cole, Vnyta. During the pre-school education program. Translation by Mofidi, F. (2011). Tehran: Samt. [Persian]. (1991)
5. Hamed Tavassoli, S.A comparative study of Comparison of the effects of distraction on pain and anxietyof planning orientation and injection procedures and satisfaction of parents of preschool age children with thalassemia province. Children nursing Master's thesis. Tarbiat Modares University.[Persian].(2008)

6. Hughes, P.F. (Ns). Play Psychology: Children, Play and development. Translated byGenji,K. (Date of publication in Persian; 2005).Tehran: Roshd**. [**Persian**]**
7. Jones, E., Landereth, G. The efficacy of intensive individual play therapy for chronic- all yill children. International journal of play therapy; 11, 117-128..(2002)
8. Karimi, R. Evaluation of nurses' knowledge of the game on the growth and development of children ages Preschool Children's Hospital affiliated to the Ministry of Health and Medical Education. nursing Master's thesis. Iran University of Medical Sciences.[Persian].(1989)
9. Kazemi Malek Mahmodi, S, Rabiee M, Kazemi Malek Mahmodi, Sh.(2007).The effect of music on the rate of anxiety among hospitalized children. Journal of Gorgan University Medical Sciences; 9(3) :59-64.[Persian]
10. Khanjari, S., Mola, F., Davachi, A., Haghani, H. Effect of Play on Anxiety of Hospitali- zed Children. Iran Journal of Nursing.14(28):31-38.[Persian].(2001)
11. Lerwick, J.L. The Impact of Child–Centered Play Therapy on Anxiety Levels in Pre- Neurosurgical Pediatric Patients. (Doctoral dissertation, Oregon State Universit, 2011). Available on: http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/25410/LerwickJulieL2012.pdf?sequence=1.(2011)
12. Li, H.C.W., Lopez,V. Effectiveness and appropriateness of therapeutic play intervent- ion in preparing children for surgery: A randomized controlled trial study. Journal for Specialists in Pediatric Nursing, *13*(2), 63-73..(2008)
13. Mahmoudi-gharaei, J., Moharari, F., Shahrivar, Z., Ashjaei, B., Alirezaei, N & Parizad,J. Effect of Preoperative Play Interventions on Post Surgery Anxiety. Iranian Journal of Psychiatry.3(4), 20-24.[Persian].(2008)
14. Mansour, Sh. The kids are playing live. Indexed in the Journal of Family morning**. [**Persian**].**(1998)
15. Mmy Yanlum H., Alhani, F., Ghofranipour, F. Evaluation of the effect of anxiety in school-age children hospitalized at Children's

Medical Center playing on Tehran. Journal of Medical Science: Pathobioligy, 4 (1, 2). 55-62. [Persian]. (2001)

16. Sheridan, M.D., (Ns). Child Development and play (birth to 6 years). Translated by Tavakoli, R., Sanaeinasab, H. (Date of publication in Persian; Tehran: Roshd.[Persian] (2003)