Available online at **www.ijmrhs.com**

ISSN No: 2319-5886

International Journal of Medical Research & Health Sciences, 2016, 5, 7S:525-531

Identifying the Effects of Education on Burnout in Parents whose Children have Cancer and Presenting Educational-Moral Pattern for Nurses and Nursing Educators in order to Use it in Students' Education

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ABSTRACT

The parents, whose children have cancer, experience a high level of stress and discomfort. The parents' effort in order to adapt to stressful situation depends on the availability and use of supportive sources including appropriate notices, social support, using appropriate financial sources and their employment status (7). Giving clear information about disease and treatment to parents in order to obtain a sense of control on opportunities and appropriate planning is helpful. The goal of this article is to identify the effects of education on burnout in parents whose children have cancer and presenting educational-moral pattern for nurses and nursing educators in order to use it in students' education. This research is semi-experimental and interventional and the method is simple sampling based on the goal of selection and it is divided into experimental and control groups. The collected data are analyzed by SPSS software, independent-t statistical methods, repeated measure test and paired-t test. The results show that educational-moral intervention influences on the decrease of burnout in parents whose children have cancer.

Key words: children who have cancer, burnout, nurses.

INTRODUCTION

The parents, whose children have cancer, experience a high level of stress and discomfort. The parents' role and child protection in life's threatening conditions will be disturbed. Numerous hospitalizations, long-term treatment and the undesirable results of treatment are the main problems of these parents [2,3]. Although the parents experience the maximum stress at the time of diagnosing the disease, in some cases a very high level of stress may remain for one year to several years after completing the treatment [4]. In a study, the parents, whose children have

chronic disease, were interviewed and the parents said that their behavior was changed after diagnosing the disease in their children. A lot of parents experience inaction, physical and mental boredom, change of behavior and other related symptoms of burnout [5]. Burnout is a response to a severe and chronic stress and its main symptoms are physical and mental boredom, decrease of personal performance and disorder in personality [6].

In 1983, Pines &Aronsson said that burnout is created in a person when he/she is exposed to a severe emotional stress [17]. Due to the influence of child's disease on parents' mental health and the important role of parents in family health and children's training and therefore the mental health of society, we should not just limit ourselves to the patient's treatment problems and physical problems and the parents whose children have cancer should be supported and the mental health of the family members specially parents should be valued. While facing with a tension such as having a child who has a cancer, the parents look for gathering information from doctors, nurses, health workers and different books helping them in recognizing their situation. The amount and the quality of information about the child's disease, the problems that parents may face with and the possible effects of disease on all phases of life will influence on adaptability process.

The Research Goals:
1-Comparing the average of burnout scores before intervention in control and experimental groups
2-Comparing the changes of the average of burnout scores before, immediately after and one month after intervention in control and experimental groups
3-Determinig the validity and reliability of Shirom & Melamed Burnout Questionnaire (SMBQ).
4-Comparing the average of burnout scores of parents before, immediately after and one month after intervention in control and experimental groups.

Review of the Literature
In 1995, in Netherlands, Van Dongen –Melman et al investigated the late social and mental complications of parents whose children survived from cancer. The goal of this research was to recognize these problems after completing the child's treatment and the related factors. 133 parents (69 mothers and 64 fathers) of the survived children participated in this research. The family and the female sex were the factors showing a significant statistical relationship with mental problems. The researchers of this research came to a conclusion that cancer during the childhood created late mental-social effects on parents specially uncertainty about the survival condition, the side effects of the disease and the effect of treatment on physical, mental and social health of child. These problems accompanied by feeling lonely show a pain that parents suffer fromin silence and it may continue years after the first treatment [16].

In 1985, in America, Barbarian investigated 33 families whose children have cancer in terms of correspondence and marital problems. 44% of them have good quality of life and marital condition. But the spouses' support and the marital quality are decreased by increasing the number of child's hospitalization in a hospital [10].

In order to investigate the mental adaptability of children who have cancer and their parents with the disease, in 1997, in Australia, Sawyer & et al have done a research for 2 years. The goal of this futuristic research was to investigate the prevalence of emotional and behavioral problems in children who have cancer and their parents. The researchers came to a conclusion that stress and insomnia problems in parents showed a tension they experienced. During the first year, the problems decreased so that their life condition was similar to control group in terms of stability.The results of this research showed the importance of initial actions in order to help and support the children who have cancer and their family during the first year after diagnosing the disease [15].

Other research has been done in 1993 in Guang dong of China on investigating the influence of child's cancer on 50 Chinese families by Martinson et al. In this research, different problems that the parents face with and the influence of the disease on other family members were reported [9].

Other research has been done in 2007 in Stockholm on burnout among 44 parents of the children survived from brain tumor by A Lindahl Norberg& Astrid Lindgren. Mental burnout was investigated in 24 mothers and 20 fathers of child survived from brain tumor. In this study, Shirom & Melamed Burnout Questionnaire (SMBQ) was used. The results showed that in 54% of mothers in the experimental group burnout is seen and in 25% of them no symptom of burnout is seen; in mothers of control group burnout is seen less than 34% and in 38% of them no burnout is seen. In 12% of fathers in experimental group burnout is seen and in 45% of them no symptom of burnout

is seen. Among fathers of control group, in 19% of them burnout is seen and in 45% of them no symptom of burnout is seen [2].

Other research has been done in 2000 in Lahore Pakistan in a 3-month period from May 2000 to July 2000 in 60 parents of children who have an acute lymphoblastic leukemia by Akhtar Iqbal &Khawer Ssiddiqui. The tools used in this research are Mini Mental State Examination and Diagnostic & Statistical Manual of Mental Disorder-fourth version(SICD-IV) in order to recognize the parents who have burnout. The results showed that burnout is seen in 56.7% [34] of parents. In addition, burnout is more among mothers, parents who have lower level of education and people who belong to low social class [12].

Other research has been done by Sloper in 1996 in England on 133 families' experiences from 5 specialized hospitals in treating the children who have cancer during 6 months after diagnosing cancer in their child; the title of this research is "needs and responses of parents after diagnosing cancer in child." The results showed that diagnosing cancer in children during the first months will broadly influence on the family[10].

Other research has been done by C Lindstorm& J Aman& AL Norberg in 2009 in Sweden on 252 parents of children who have type 1 diabetes and 38 parents of children who have inflammatory bowel disease; the title of this research is "the increasing of the prevalence of burnout symptoms in parents of children who have chronic diseases." The results showed that 36% of parents of children who have chronic diseases show the symptoms of burnout in comparison with the parents who have healthy children and only 20% of them show the symptoms of burnout. The symptoms of burnout are mainly seen in mothers of children who have diabetes, although in fathers of children who have diabetes and parents of children who have inflammatory bowel disease a high level of burnout symptoms are reported [5].

Other research has been done by Hexem KR& Mollen CJ in 2011 in Philadelphia on 73 parents of children who have life threatening disease and have disorders in decision-making process for palliative care; the title of this research is "how do the parents of children who receive palliative care use religion, spiritualities or philosophy of life in difficult situations?" the results showed that most of the parents of children who receive palliative care feel that spiritualities play a very important role in decision-making process. Most of the parents have participated in individual or group rituals and participating in rituals has resulted in sense of control, peace, correction of moralities in them and the feeling of receiving support from God. On the other hand, some of the parents feel anger and hatred toward God and they eject their religious beliefs and also religious groups[8].

Other research has been done by Hashemi in 2008 in Shiraz on 44 parents (two-parent families) of children who have cancer; the title of this research is "investigating the accommodative approaches used by parents of children who have cancer." In this research, the accommodative approaches have been investigated in 5 fields of social support, reorganizing, moral support, seeking help and passive assessment. The results showed that parents used the accommodative approach of moral support (96%) more than social support. Other approaches used are respectively seeking help, reorganizing and passive assessment [1].

Kind of Research

This research is interventional and at first the samples are selected by simple and available sampling method according to the inclusion criteria and the goal and after getting the written knowingly consent, the samples are divided into control and experimental groups. The statistical society of this research is the parents of 2 to 6 year-old children who have cancer and have the requirements of entering the research. In this research, the sample is a part of research society that goes to Amir Hospital in Shiraz. The sample size of each group (experimental and control) is determined70 and in overall 140 according to the opinion of statistics specialist and by using the statistical formula of calculating the sample size by using power SSC software for the difference of two averages with confidence of 95%, power of 80%, standard deviation of 10.5 and the minimum acceptable difference of 5.

Research Findings

Table 1: average age of parents of children who have cancer

Age	Average	Standard deviation	Confidence interval*
Experimental group	34/50	9/008	32/27-36/74
Control group	34/30	6/77	32/68-35/91

**Confidence interval of 95% for average*

The average age of parents of children who have cancer is shown in table 1. According to t-test, no significant difference is seen between average ages in two groups. (p-0/87 and t-0/15).

Table 2: frequency distribution of parents' sex in experimental and control groups

Sex	Female		Male		Total	
Experimental group	Frequency	Frequency percent	Frequency	Frequency percent	Frequency	Frequency percent
	38	28/1	27	20	65	48/1
Control group	38	28/1	32	23/7	70	51/9

Distribution of sex is shown in table 2. According to chi-square test, p-0/62 and -0/23, no significant statistical difference is seen between distribution of sex in two groups.

Table 3: parents' income in experimental and control groups

Income	Low		Average		Good		High	
Experimental group	Frequency	Frequency percent	Frequency	Frequency percent	Frequency	Frequency percent	Frequency	Frequency percent
	3	2/2	20	14/8	30	22/2	12	8/9
Control group	0	0	28	20/7	25	18/5	17	12/6

Income distribution of two groups is shown in table 3. According to Fisher's exact test p-0/15, no significant statistical difference is seen.

Table 4: parents' level of education in experimental and control groups

Level of education	Literacy		Primary and guidance school		Diploma and Associated degree		BA and higher	
Experimental group	Frequency	Frequency percent	Frequency	Frequency percent	Frequency	Frequency percent	Frequency	Frequency percent
	3	2/2	22	16/3	25	18/5	15	11/1
Control group	5	3/7	17	12/6	38	28/1	10	7/4

In this table the parents' level of education in two groups is shown. According to chi-square test p-0/02, no significant statistical difference is seen between two groups in terms of education.

Table 5: comparing the average scores of burnout before intervention in experimental and control groups

Group	Experimental				Control				P
Burnout scores before intervention	Average	Standard deviation	Maximum	Minimum	Average	Standard deviation	Maximum	Minimum	0/59
	4/28	0/61	6/05	3/75	4/23	0/50	5/67	3/34	

In table 5, comparing the average scores of burnout before intervention in experimental and control groups is shown. The findings of this table show that the average scores of burnout before intervention in experimental group is 0/61→4/28 and in control group is 0/50→4/23. The results of independent-t test show that there is no significant statistical difference between averages of the two groups before intervention (p=0/59).

Table 6: comparing the average and the changes of the average scores of burnout immediately after intervention in experimental and control group

Group	Experimental			Control			P
Burnout scores Immediately after intervention	Average	Standard deviation	Changes of the average	Average	Standard deviation	Changes of the average	<0/001
	3/25	0/68	0/65→1/02	4/33	0/56	0/36→-0/09	

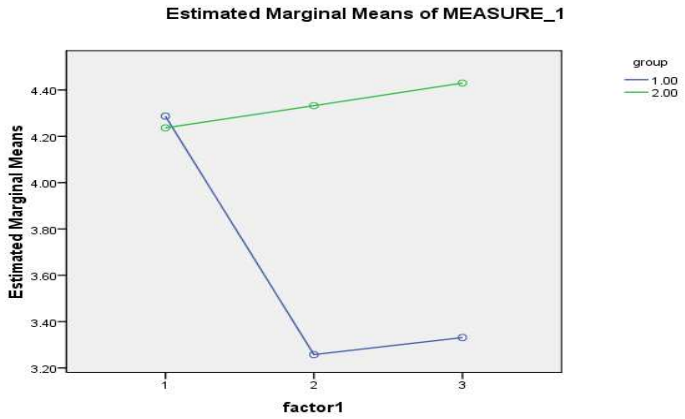
As it is shown in this table, immediately after intervention, the burnout score in experimental group is 0/68→3/25 and it is 0/56→4/33 in control group.The findings of this table show that immediately after intervention, the burnout score in experimental group is lower than control one. The analysis of data by using independent-t test shows that there is a significant statistical difference between burnout scores of experimental and control groups immediately after intervention (p< 0/001) and the amount of effect size is 1/58 showing the effectiveness of intervention.

Table 7: comparing the average and changes of the average scores of burnout one month after intervention in experimental and control group

Group	Experimental			Control			P
Burnout scores One month after intervention	Average	Standard deviation	Changes of the average	Average	Standard deviation	Changes of the average	<0/001
	3/33	0/68	0/67→0/95	4/42	0/57	0/39→-0/19	

The findings of this table show that one month after intervention, the burnout score in experimental groupis 0/68→3/33 and it is 0/57→4/42 in control group. The results of independent-t test shows that there is a significant statistical difference in terms of average score of burnout between experimental and control groups one month after intervention (p< 0/001) and the average score of burnout in experimental group is lower than control one on month after intervention.

Diagram 1: comparing the average scores of burnout before, immediately after and one month after intervention in experimental and control group



1. Experimental group
2. Control group

Table 8: comparing the average scores of burnout in fathers with mothers before intervention in experimental and control group

Group		Experimental			Control			P
Burnout scores before intervention	**Mothers**	Average	Standard deviation	Number	Average	Standard deviation	Number	<0/001
		4/37	0/66	38	4/35	0/57	38	
	Fathers	4/16	0/50	27	4/09	0/32	32	
	Total	4/28	0/61	65	4/23	0/50	70	

In this table, the average scores of burnout in fathers of experimental group is 0/50 →4/16 before intervention and the average scores of burnout in mothers of experimental group is 0/66→4/37 before intervention. And the average scores of burnout in fathers of control group is 0/32→4/09 before intervention and the average scores of burnout in mothers of control group is 0/57→4/35 before intervention. The results show that there is a significant statistical difference between the burnout scores of fathers and mothers in experimental and control group before intervention (F-6/18, p-0/001).

Table 9: comparing the average scores of burnout in fathers with mothers immediately after intervention in experimental and control group

Group		Experimental			Control			P
Burnout scores immediately after intervention	**Mothers**	Average	Standard deviation	Number	Average	Standard deviation	Number	0/93
		3/22	0/68	38	4/37	0/58	38	
	Fathers	3/30	0/67	27	4/27	0/54	32	
	Total	3/25	0/67	65	4/33	0/56	70	

In this table, the average scores of burnout in fathers of experimental group is 0/67 →3/30 immediately after intervention and the average scores of burnout in mothers of experimental group is 0/68→3/22 immediately after intervention. And the average scores of burnout in fathers of control group is 0/54→4/27 immediately after intervention and the average scores of burnout in mothers of control group is 0/58→4/37 immediately after intervention. The results show that there is no significant statistical difference between the burnout scores of fathers and mothers in experimental and control group immediately after intervention (F-0/008, p-0/93).

Table 10: comparing the average scores of burnout in fathers with mothers one month after intervention in experimental and control group

Group		Experimental			Control			P
Burnout scores one month after intervention	**Mothers**	Average	Standard deviation	Number	Average	Standard deviation	Number	0/58
		3/29	0/70	38	4/52	0/62	38	
	Fathers	3/38	0/65	27	4/32	0/49	32	
	Total	3/33	0/68	65	4/42	0/57	70	

In this table, the average scores of burnout in fathers of experimental group is 0/65→3/38 one month after intervention and the average scores of burnout in mothers of experimental group is 0/70→3/29 one month after intervention. And the average scores of burnout in fathers of control group is 0/49→4/32 one month after intervention and the average scores of burnout in mothers of control group is 0/62→4/52 one month after intervention. The results show that there is no significant statistical difference between the burnout scores of fathers and mothers in experimental and control group one month after intervention (F-0/29, p-0/58).

CONCLUSION

The findings of this research are analyzed in order to test the research hypotheses. The analysis of data and the results of statistical tests confirm the research hypotheses. According to research findings and the results of statistical tests, it can be said that implementing education-moral intervention in parents of children who have cancer can decrease the burnout score in them. One of the key roles of nurses is educational role, so the nurses, as the educators of the parents of children who have cancer, can improve the performance of this group of parents by increasing the knowledge. According to the development of the frontiers of knowledge and the use of new techniques and technologies in treatment of these children, the acute nature of hospital has changed to chronic nature. According to the very important role of parents in treatment of children and also according to the fact that cancer treatment is a period of chronic stress for the parents of these children, it can be suggested that in treatment and care process of these children, we should take into consideration the spiritual and moral needs of the parents of these children in addition to physical needs. Since the time of patient's hospitalization, the nurses interact with the patients and their families more than other health workers. The nurses understand the importance of considering moral and spiritual needs more, due to closer interaction with the patient and his/her family. One of the challenges of the planners of nursing education is to prepare the nursing students who consider spiritual care. Including spiritualities and spiritual care in different courses of nursing education makes the students become sensitive to this factor and create motivation for them. Emphasizing on the importance of spiritualities and its influence on mental health in clinical courses will result in the institutionalization of this factor in nursing students.

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