EFFECTIVENESS OF NURSING EDUCATIONAL PROGRAM ON NURSES’ KNOWLEDGE REGARDING PAIN MANAGEMENT FOR POSTOPERATIVE PATIENTS

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ABSTRACT

Pain is one of the universal medical problems in health institutions. In fact it can directly affect patients' comfort and lifestyle, causing nausea, vomiting, fatigue, stress, lack of control, poor quality of life, and a lack of sexual activity and public relations, also it can lead to poor work performance and daily activities. The aim of the study is to investigate the effect of nursing educational program about postoperative pain management for postoperative patients. A quasi-experimental design has been applied on (50) nurse to evaluate the effectiveness of an educational program on nurses’ knowledge about management of patients with postoperative pain in AL-Najaf AL-Ashraf city at Al-Sadder medical city through the period October 1st, 2018 to, August 18th, 2019. The results of the study show there is a high significant effect of the educational program regarding nurses’ knowledge toward postoperative pain management. The study concluded that the majority of nurses in surgical ward had knowledge deficit concerning management of patient with postoperative pain. The study recommends to encouraging nurses to enroll in sessions of special courses and conference to improve their knowledge and keep them up to date toward postoperative pain management.

Keywords: Postoperative, Educational program, nurse, Knowledge, Patient

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INTRODUCTION

Pain is one of the universal medical problems in health institutions [1]. In fact it can directly affect patients' comfort and lifestyle, causing nausea, vomiting, fatigue, stress, lack of control, poor quality of life, and a lack of sexual activity and public relations, also it can lead to poor work performance and daily activities [2,3]. Surgery has taken a large role in the healing of several cases of disease and save patients from difficult situations [2]. In particular, more than 72 million patients in united states are undergoing surgery and approximately more than one half of this number of patient was suffering from postoperative pain [2]; although, 80% of patients who have undertaken surgery will suffer acute pain [4]. Some researches goes on to note that pain in the chest or abdomen can affect the breathing process, lead those people try to respire slowly and escape coughing. If the pain is severe, and as well as the severe pain will make patient to avoid motion and early recovery after surgery [4, 5]. In Turkey, a study about the levels of awareness of nurses and their philosophies about control of pain has been found that there are approximately 55% to 78.6% of patients still suffer from moderate to great pain [6, 7].
Study Objectives:
1- To assess the nurses Knowledge regarding pain management.
2- To assess the effectiveness of nursing educational program by comparing the pre-test and post-test score on nurse’s knowledge regarding postoperative pain management.
3- To find out relationship between the effectiveness of educational program and the nurses demographic data.

MATERIAL AND METHODS

Study Design
In this, study a Quasi- experimental design has been used in the existing study to evaluate the effectiveness an educational program on nurse’s knowledge about management of patients with postoperative pain in AL-Najaf AL-Ashraf city at Al-Sadder medical city through the period October 1st, 2018 to July 31st, 2019.

Setting of the study
The study is conducted in Al-Najaf City/Al-Najaf Al-Ashraf Health Directorate / Al-Sadder Medical City (RCU and surgical ward)

Study Sample:
Study sample consist of 50 nurses, the sample is separated accidentally into two groups; 25 nurses as a study group are exposed to the nursing education program, and the other 25 nurses are not exposed to the program considered as the control group.

Statistical analysis
Through the use of excel and statistical package of social sciences (SPSS) version 24 the data of present study are analyzed.

RESULTS

Table 1: Socio-Demographic Characteristic of the Study Sample with Statistical Differences

<table>
<thead>
<tr>
<th>Demographic Data</th>
<th>Groups</th>
<th>Study Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Freq.</td>
<td>%</td>
</tr>
<tr>
<td>Age / Years</td>
<td>20-24</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>25-29</td>
<td>14</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>30-34</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>35-39</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>40 and more</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Gender</td>
<td>male</td>
<td>17</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>Levels of Education</td>
<td>Nursing course graduate</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Nursing school graduate</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Nursing preparatory</td>
<td>5</td>
<td>20</td>
</tr>
</tbody>
</table>
Table (1) reveals that the high percentage of both groups participant at age groups (25-29) years, (56%) in the study group and (48%) in the control group. In addition, the table shows that the high percentages of male participant in the study was (68%), while in the control group was (64%). Regarding the level of education, the highest percentage is (48%) of the sample in study group are graduated from nursing institute, and (56%) of the control group are graduated from nursing institute.

In regards to years of experience, the table shows that (44%) of the sample in study group and (52%) of the sample in control group have (4-6) years of experience in nursing. In regards to years of experience in surgical ward, the results show that the majority of study group (76%) and (72%) of sample in control group have (1-4) years of experience in surgical ward, while (100%) of the sample in the study group and (96%) of them in control group have no training session regarding postoperative pain management.

Table 2: Statistical distribution of the study group by their overall responses with Significant Difference between Pre-Test and Post-Test Scores

<table>
<thead>
<tr>
<th>Overall assessment for study group</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freq.</td>
<td>%</td>
</tr>
<tr>
<td>Pass</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Fail</td>
<td>22</td>
<td>88</td>
</tr>
</tbody>
</table>

$t$-value (21.687), d.f. (24), p-value (0.001)

HS
The results of this table show that high Significant mean difference among study group concerning to their pre-test and post-test scores at p-value (0.001)

Table 3: Statistical distribution of the Control group by their overall responses with Significant Difference between Pre-Test and Post-Test Scores

<table>
<thead>
<tr>
<th>Overall assessment for control group</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq.</td>
<td>%</td>
<td>M.s.</td>
</tr>
<tr>
<td>Pass</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Fail</td>
<td>92</td>
<td>90</td>
</tr>
</tbody>
</table>

\[ t\text{-value (0.84); d.f(24);p-value (0.4);significance: NS} \]

The results of above table show that no significant mean difference among control group relative to their Pre-Test and Post-Test Scores at p-value (0.4)

Table 4: Significant Difference between Study and Control Groups regarding Pre-Test Scores

<table>
<thead>
<tr>
<th>Pre-Test</th>
<th>Study group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq.</td>
<td>%</td>
<td>M.s.</td>
</tr>
<tr>
<td>Good</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Weak</td>
<td>22</td>
<td>88</td>
</tr>
</tbody>
</table>

\[ t\text{-value (0.581), d.f. (48), p-value (0.56)} \]

NS

Table (4) shows that there is no significant differences between study and control groups in pre-test at p-value (0.56) which clearly indicated poor knowledge of both groups in pre-test.

Table 5: Significant Difference between Study and Control Groups regarding Post-Test Scores

<table>
<thead>
<tr>
<th>Post-test</th>
<th>Study group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq.</td>
<td>%</td>
<td>M.s.</td>
</tr>
<tr>
<td>Good</td>
<td>23</td>
<td>92</td>
</tr>
<tr>
<td>Weak</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>
The results of table (5) show a highly significant difference which found between the post-test of the study group who are participated in the educational sessions and the control group who did not exposed to any intervention related to knowledge at p-value (0.001).

DISCUSSION

Socio-Demographic Data of the Study sample

According to (table 1) in the results, the study shows no significant difference between the study and control groups regarding Socio-demographic data. Concerning their age, the majority of study and control groups are at age group of (25-29) years. This result match with the result of Alreshidi (2016) [7] who find in his study that the majority of the study subjects age are between (26-30) year old. Also (Famakinwa, et al., 2014) [9] in there study about postoperative pain management among health care staff in hospital of ILE-IFE they stated that the majority of the sample in their study are at age group between (21-30) year old. About the gender of the study subjects, the highest percentage were males in both study and control groups, which is in consistency with (Khaled, 2016) [10] in his thesis about the “Effect of Educational Programs on Knowledge and Attitudes of Surgical Nurses Regarding Pain in Taif Hospitals” he mentioned that males are the dominant gender in his study (60%). Regarding the level of education, the largest group of sample of the study was graduated from nursing institute for both study and control groups. Many previous studies were in agreement with this result they found that the majority of the nurses working in surgical ward are graduate from institute [11, 7]. Concerning the year of experience, the result of present study revealed that the majority of nurses in study and control groups are between (4-6) years of experience. This result is supported by (yava, et al., 2013) [8], (Nimer & Ghrayeb 2017) [12], and (Demeh, et al., 2016) [13], as their results indicated that the higher percentage of the study and control groups for years of experience in nursing are between (1-5) year. Regarding years of experience in surgical ward, the present study show that majority of both groups study and control have between (1-4) years. This result agrees with another study done by. (Menlah, et al., 2018&Famakinwa, et al., 2014) [11, 9] they pointed that most of the nurses in both study and control groups had (1-5) year. About training sessions toward management of postoperative, pain the study show that all sample in the study group had no training sessions. While the control group had only (4%) of the sample had training sessions. This result agrees with several studies that indicate in their results that the majority of the study sample had no training sessions [7, 13, 8].

Nurses’ Knowledge Concerning Management of patient with Postoperative pain in both groups (Tables 2 and 3)

The result of the present study indicated that the study sample knowledge is deficit in pre-test for both study and control groups, the study found that there are about 88% of study group did not pass in pre-test. While about 90% of control group also did not pass in pre-test. Many studies found that there is no significant differences between study and control groups for pre-test related to nurses’ knowledge at P<0.05 [14, 15]. Alzghoul and Abdullah, (2015) [16], in their study “Pain Management Practices by Nurses: An application of the knowledge, Attitude, and practices Model” they concluded their results by emphasizing that there a deficit knowledge of nurses’ about postoperative pain management prior to participation in the educational
intervention. Also, Dijk, (2017)[15] show in her study about postoperative Pain Knowledge and patients and nurses beliefs, that the nurses knowledge with educational program become better than without educational program. Quliti and Alamri, (2015) [17] Concluded the result from their study “Assessment of pain Knowledge, Attitude, and Practice of health care provider” that there is deficit in pain assessment and management before educational course.

The effectiveness of educational program on Nurses Knowledge Concerning of management patients with postoperative pain for study and control group (Tables 2; 3; 4 and 5)

In regarding to the result in the above tables show that nurses knowledge regarding management of patient with postoperative pain in the study group has been improved after exposure to educational program. This indicates by the significant difference between pre-test and post-test result, which is supported by a previous study, which indicated that there is a high significance difference between pre-posttest [14].In addition Khader (2016) [10], found in their study the applying of pain educational program could improve nurses’ knowledge regarding patients with postoperative pain. Moreover, the study claimed that significant increase in post-test score is recognized. The researcher confirms that nurses’ knowledge deficit in pretest in both study and control groups regarding nursing management of patient with postoperative pain might due to improper preparation for nurses in surgical ward. Moreover, less emphasize on participation in educational courses. The educational program for management of patient with postoperative pain is associated with a significant increasing knowledge of study group. This result is in agreement with (Arab, 2016) [3], who indicate that providing postoperative education classes to nurses can be successful in increasing nurses’ knowledge. Therefore, the implemented educational program is effective and has an impact on nurse’s knowledge about management of patients with postoperative pain. Present study is supported by many studies that mentioned there are highly significant differences for nurses’ knowledge in post-test between study and control group[8, 18].The results of the nurses’ level of knowledge did not have significant changes in control group between pretest and posttest. This is in agreement with (Dijk, 2017) [15], who indicated that a nurse does not participate in continues education session, they did not make update for their knowledge toward postoperative pain.

CONCLUSION

1. Almost all nurses in the study sample had no previous training course on postoperative pain management.
2. Majority of nurses in surgical ward had knowledge deficit concerning management of patient with postoperative pain.
3. There are large improvements in nurses’ level of knowledge in the post-test for study group after exposing these nurses to educational program concerning management of patient with postoperative pain.
4. No significant modification was present for nurses in Control group in their level of knowledge toward postoperative pain at pretest and posttest.

RECOMMENDATIONS
1- Ministry of health should find encouragement methods to involve nurses in it such as seminar and symposium to improve their knowledge and keep them up to date toward postoperative pain management and change old information that proved to be wrong with every update information.

2- Distribution of the applied educational program of this study as a booklet or posters for the hospital staff can participate in improving knowledge

3- Reassessment of knowledge and follow-up must be applied for all nurses after educational session to evaluate and to promote their knowledge.

4- Health directorates in Iraqi governorates should apply continuous education activities to improve nurses’ knowledge toward postoperative pain management

ETHICAL CLEARANCE

The Research Ethical Committee at scientific research by ethical approval of both environmental and health and higher education and scientific research ministries in Iraq

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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