Comparing the Effect of Continuous Care Model and Partnership Care Model on the Sleep Quality: A Systematic Review

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Authors’ contributions

All authors have Contribution at all stages of the article, such as study concept and design, study supervision, drafting of the manuscript, and critical revision of the manuscript for valuable intellectual content. The final manuscript was approved by all authors.

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ABSTRACT

Background: Sleep quality is one of the important variables that effectson the individual health status. For this reason, the present study aims to investigate the effect of CCM and PCM on the patients’ sleep quality.

Methods: All interventional articles about the effect of CCM and PCM on sleep quality status were searched with the keywords of CCM, PCM, partnership care model, continuous care model and sleep quality at the Iranian scientific databases such as SID, Magiran, IranMedex and ISC, and the international databases such as Pubmed, Science Direct, Cochrane, Scopus and Web of Science. Then, after reviewing the entry and exit criteria and qualitative evaluation of the articles, Excel software was used to analyze the data.

Results: In this study, all published article about CCM, PCM and Sleep quality were reviewed. All of the articles were conducted as clinical trial and the diagnostic tool of them were Pittsburg, in this
1. INTRODUCTION

Sleep quality is one of the important variables influencing the individual health status [1]. Using pharmaceutical and non-pharmaceutical methods is one of the ways to increase the sleep quality of patients [2], pharmaceutical treatments have many complications and costs for the patients, therefore, using non-pharmaceutical treatment is more effective in improving the status of sleep quality in patients [3,4]. Non-pharmaceutical treatments include music therapy [5], mind-body intervention [6], nurse-led intervention [3], yoga [7], collaborative care model or partnership care model (PCM) [8] and continuous care model (CCM) [9]. Using a more compatible intervention within a culture of society has a greater role in improving the health status of patients [9]. Among the interventions, localized models such as CCM and PCM are more compatible with the culture of Iran [10,11].

CCM is an Iranian localized care model that has been designed and developed by Dr. Ahmadi [12-14]. Continuous care model is a regular process for effective, interactive, and consistent communication between patients and care facilitators [11]. The main purpose of this model is to design a plan that can be used in continuous care [15]. The CCM consists of four stages of orientation (with the aim of identifying the patients, the family, and nurses and explaining the steps of model), sensitization (involving the patients and their family to implement continuous care approach), control (institutionalization and continuity of health behavior), and evaluation (evaluating the care process, reviewing achievements and failures, measuring and comparing control indicators) [9,16,17]. This model was performed within 12 weeks including two stages of familiarization and sensitization (during 3 weeks) and control and evaluation stages (during 9 weeks) [18].

Another Iranian localized model is PCM [19,20]. In PCM the quality of the kind of relationship and the existing quality between two sides of research is important, and it considers the significance of patients participatory role in their treatments more than their individual role [10]. Furthermore, this model includes four stages of motivation (stimulating the patient and informing people about the condition of the disease), readiness (planning for the individual's awareness and performing the duties), involvement (including three visits to educational partnership and two visits to follow-up partnership in evaluating the positive and negative outcomes of the undertaken trainings and actions), and evaluation. The PCM model was performed during 3 months and 5 visits [21,22]. In several studies, this model has been used to improve mental health status [10], quality of life [23], stress, anxiety and depression [24], and has improved the health status of patients.

Considering the fact that these two models are indigenous models of Iran and have been studied in different aspects of sleep quality, but neither of the studies have compared their overall impact on the sleep quality status. Hence, the present study has performed with the aim of determining the effect of CCM and PCM on the status of sleep quality in patients.

1.1 Aim

This study is a systematic review (SR) that examines the effect of CCM and PCM on the status of sleep quality in patients.

2. METHODS

2.1 Study Protocol

Published articles were searched from the foundation of these two models until June 2019 (17 years). The search was performed with
keywords of CCM, PCM, partnership care model, continuous care model, collaborative care model and sleep quality in the Iranian scientific databases such as SID, Magiran, IranMedex and ISC, and international databases like Pubmed, Science Direct, Cochrane, Scopus, Web of Science, as well as google scholar.

2.2 Search Strategy

Researchers collected all the articles that were performed with the aim of CCM and PCM effect on the status of sleep quality in patients. The entry criteria in the research include having a similar program to CCM and PCM, test and control groups, measurements of sleep quality before and after the intervention and using the PSQI sleep quality questionnaire. The exit criteria include duplication studies and presenting inadequate data (Fig. 1).

2.3 Inclusion and Exclusion Criteria

In this study, searching articles was done by two familiar researchers with the CCM and PCM models. If there was a controversy among the researchers about the context of performed searchings, the third professional author in this field evaluated the searchings and verified them.

![Fig. 1. The PRISMA diagram](image-url)
Table 1. Characteristics of the studies which underwent final analyses

<table>
<thead>
<tr>
<th>First Author (Ref)</th>
<th>Type of intervention</th>
<th>City</th>
<th>Year</th>
<th>Type of disease</th>
<th>Sample size</th>
<th>Control</th>
<th>experimental</th>
<th>questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golafrooz [27]</td>
<td>CCM</td>
<td>Sabzevar</td>
<td>2014</td>
<td>type 2 diabetes mellitus</td>
<td>80</td>
<td>40</td>
<td>40</td>
<td>PSQI</td>
</tr>
<tr>
<td>Khosravan [28]</td>
<td>CCM</td>
<td>Gonabad</td>
<td>2015</td>
<td>type 2 diabetes mellitus</td>
<td>68</td>
<td>34</td>
<td>34</td>
<td>PSQI</td>
</tr>
<tr>
<td>Mehdizadeh [29]</td>
<td>CCM</td>
<td>Tehran</td>
<td>2010</td>
<td>Chemical Warfare Victims with Bronchiolitis Obliterans</td>
<td>62</td>
<td>32</td>
<td>32</td>
<td>PSQI</td>
</tr>
<tr>
<td>Alamdarloo [31]</td>
<td>PCM</td>
<td>Shiraz</td>
<td>2015</td>
<td>undergoing Coronary Artery Bypass Graft Surgery</td>
<td>60</td>
<td>30</td>
<td>30</td>
<td>PSQI</td>
</tr>
<tr>
<td>Nayyeri [25]</td>
<td>PCM</td>
<td>Sabzevar</td>
<td>2015</td>
<td>heart failure</td>
<td>102</td>
<td>50</td>
<td>52</td>
<td>PSQI</td>
</tr>
<tr>
<td>Fahahmi</td>
<td>PCM</td>
<td>Ilam</td>
<td>2018</td>
<td>Cardiovascular Patients</td>
<td>60</td>
<td>30</td>
<td>30</td>
<td>PSQI</td>
</tr>
<tr>
<td>Lashkari [26]</td>
<td>PCM</td>
<td>Ahvaz</td>
<td>2013</td>
<td>hemodialysis</td>
<td>52</td>
<td>26</td>
<td>26</td>
<td>PSQI</td>
</tr>
</tbody>
</table>
2.4 Quality of Studies

The researcher has categorized the extracted information based on the first author's name, the type of intervention, year of publication, the studied patients, sample size, number of patients in the control group, number of patients in the test group, the average age of patients and the type of questionnaire.

2.5 Data Analyses

Excel software was used to analyze the data.

3. RESULTS

In this study, all published article about CCM, PCM and Sleep quality were reviewed. All of the articles were conducted as clinical trial and the diagnostic tool of them were Pittsburg, in this instrument lower rate indicate less sleep disorder. The sample size of the study was 540 Patients, the highest and lowest sample size were Nayyeri et al [25] with 102 Patients and Lashkari et al. [26] With 52 Patients, respectively. Table 1 shows the characteristics of the studies which underwent final analyses.

4. DISCUSSION

The findings of the study showed that the implementation of CCM and PCM models as a non-pharmaceutical intervention increased the sleep quality in patients. In previous studies, performing educational intervention which was carried out in accordance with a regular protocol, improved the patients’ sleep quality. So that in the systematic review study by Zou et al. with the aim of determining the effect of mindfulness-based (Baduanjin) exercise on the status of chronic patients’ sleep quality, the findings showed that the implementation of this non-pharmaceutical intervention had increased the sleep quality of patients[32].

According to the findings of the present study, the implementation of PCM as a non-pharmaceutical intervention improved the sleep quality in patients, that is in consistent with the results of the studies with the aim of examining the effect of non-pharmaceutical intervention in the status of sleep quality. So that in a systematic and meta-analysis review by Hwang et al., aimed at influencing 12 interventional articles on the effects of aromatherapy, it was shown that the implementation of aromatherapy improved the status of sleep quality in patients [27]. Furthermore, Yang et al. reviewed the effects of sports interventions on the sleep quality status of middled aged and older adults with sleep disorders, the results showed that implementation of these non-pharmaceutical interventions improves the status of sleep quality among patients 33], which is in consistent with the results of the present study with the aim of PCM effect on the sleep quality of patients.

5. CONCLUSION

Considering the more positive effect of CCM and PCM in improving the status of sleep quality in patients, so the implementation of this model is recommended to improve the patients’ sleep quality.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES


