INPLASY PROTOCOL

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Effects of Empowerment Education on patients after Percutaneous Coronary Intervention: a meta-analysis and systematic review

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Review question / Objective: To evaluate the effects of Empowerment Education on patients after Percutaneous Coronary Intervention. P:Adult patients after PCI. I:Empowerment Education nursing mode. C:usual nursing mode.O:Patients' quality of life score (SF-36 scale), self-care ability (ESCA score), anxiety and depression status (SAS, SDS, HADS, CD-RISC), coronary heart disease cognition level (AHA compiled the "American Guidelines for Percutaneous Coronary Intervention" compiled the disease cognition level questionnaire, PKS-CHD questionnaire), medication compliance, and postoperative complications. S:Randomized controlled trial, quasi-experiment, Cohort study.

Condition being studied: PubMed、Embase、Web of Science、Elsevier Science Direct、The Cochrane Library、CNKI、WanFang Data and VIP database.

INTRODUCTION

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complications. S:Randomized controlled trial,quasi-experiment, Cohort study.

Condition being studied: Epidemiological data show that cardiovascular disease currently accounts for about one-third of all deaths worldwide. Although mortality rates for CAD have declined in recent decades, CAD remains the leading cause of death in the United States and poses a significant economic burden. In the treatment of Coronary heart disease, Percutaneous Coronary Intervention (PCI) is not only safe but also effective. However, PCI is only a mechanical recalculation of blood vessels, which cannot fundamentally correct the risk factors (such as smoking, hypertension, hyperlipidemia, etc.). In addition, many patients still suffer from chest tightness, fatigue and other uncomfortable symptoms after discharge after PCI due to the lack of knowledge of the disease, fear of the operation, anxiety and depression and other factors, which bring huge troubles to their lives. Therefore, it is particularly important to implement effective nursing education mode for postoperative rehabilitation of patients after PCI.

Currently, studies on enabling education have been widely carried out in patients with chronic diseases such as type 2 diabetes, cancer, and long-term dialysis for kidney disease, and a number of meta-analyses have confirmed its safety and effectiveness in the field of chronic disease rehabilitation. In the cardiovascular field, studies have shown that health programs based on empowerment theory can change the attitude of patients with coronary heart disease to disease cognition and improve their physical condition. In recent years, due to the extensive development of PCI technology, more and more researchers began to try to apply enabling education as a nursing mode to PCI postoperative education, in order to increase patients' understanding of the disease, improve patients' quality of life, reduce and prevent the occurrence of complications. However, currently, there is no meta-analysis on how enabling education can improve the quality of life of patients after PCI. Therefore, this study conducted a systematic evaluation of this subject, so as to conduct an in-depth discussion on the value of enabling education applied to patients after PCI and provide certain reference for future clinical nursing concept research.

METHODS

Search strategy: Computer search of The following electronic databases :PubMed, Embase, Web of Science, Elsevier Science Direct, The Cochrane Library, CNKI, WanFang Data, and VIP database.Search Terms:[Empowerment OR Empowerment Education,Patient,Empowerment,Patient,Participation,Patient Involvement,Self-management,Self-care,Self-efficacy] AND [Percutaneous Coronary Intervention OR PCI,Stent Intervention,Coronary Intervention,Interventional operation] AND [Cardiovascular disease OR Heart disease,Coronary disease,Coronary heart disease,CHD,Myocardial infarction,Acute coronary syndrome,ACS,Angina].

Participant or population: Adult patients after PCI.

Intervention: Empowerment Education nursing mode.

Comparator: Usual nursing mode.

Study designs to be included: Randomized controlled trial,quasi-experiment or Cohort study.

Eligibility criteria: The research types include the currently published studies on the intervention of enabling education mode in the rehabilitation of patients after PCI, and the literature only includes Chinese and English. The subjects were patients over 18 years of age who underwent PCI revascularization due to coronary heart disease. The research types of this study include the currently published studies on the intervention of enabling education mode in the rehabilitation of patients after PCI, and the literature only includes Chinese and English. Subjects were treated with PCI revascularization due to coronary heart

disease (including angina pectoris and myocardial infarction), regardless of gender, age, race, or nationality. There is no limit to the method, duration, frequency, or content of enabling education using the enabling education nursing model as an intervention. Randomized controlled trials (RCTS) are preferred in order to obtain sufficient evidence for comparison, but non-randomized controlled clinical trials (CCTS) are also considered due to the limited number of RCTS. Studies where data were not available, important outcome measures were not adequately stated, and all reviews, protocols, and bibliometric analyses were excluded.

Information sources: PubMed、Embase、Web of Science、Elsevier Science Direct、The Cochrane Library、CNKI、WanFang Data and VIP database.

Main outcome(s): Patients' quality of life score (SF-36 scale), Self-care ability (ESCA score), Anxiety and depression status (SAS, SDS, HADS, CD-RISC).

Additional outcome(s): Coronary heart disease cognition level (AHA compiled the "American Guidelines for Percutaneous Coronary Intervention" compiled the disease cognition level questionnaire, PKS-CHD questionnaire),Medication compliance, and postoperative complications.

Data management: Two participants screened the literature, extracted the basic information and cross-checked.The differences were discussed and negotiated by the third person. Obviously irrelevant articles were excluded by title during the screening process, and then the abstract and the full text were read to determine whether the articles could be included. If necessary, the authors of the original articles were contacted by email or phone to obtain information about key articles.

Quality assessment / Risk of bias analysis: Two evaluators assessed the bias risk of included RCTs in the Cochrane5.1.0 manual. Newcastle-Ottawa Quality Assessment Scale was used to evaluate the literature quality of two cohort studies. The JBI Critical Appraisal Checklist was used to assess the quality of QES studies.

Strategy of data synthesis: RevMan5.4 software was used for statistical analysis. Mean difference (MD) or standard mean difference (SMD) was used as effect analysis statistic for continuous variables, and Relative risk (RR) was used as effect analysis statistic for dichotomous data with 95% confidence intervals (95% CI). When homogeneity was found among the included studies ($P > 0.10$, or $I^2 < 50\%$), were analyzed using the fixed effects model.When there is heterogeneity, if $P < 0.10$ and $50\% < I^2 \leq 75\%$, the random effects model is used for analysis, If $P < 0.10$ and $I^2 > 75\%$, sensitivity analysis or subgroup analysis should be used to investigate the source of heterogeneity. After excluding the influence of obvious clinical heterogeneity on the study, random effects model was used for meta-analysis. For the outcome indicators with significant heterogeneity, only descriptive analysis was performed if subgroup analysis and sensitivity analysis could not be performed.

Subgroup analysis: If there is significant heterogeneity, subgroup analysis is performed based on possible sources of heterogeneity.

Sensitivity analysis: Sensitivity analysis will be performed to evaluate the robustness of the results by excluding high-risk studies.

Language restriction: English, Chinese.

Country(ies) involved: China (Tianjin University of Traditional Chinese Medicine).

Keywords: Empowerment;Coronary heart disease; PCI; Nursing mode.

Contributions of each author:
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