Article Analysis and Evaluation of Research Ethics

Article Citation and Permalink	Zheng, F., Liu, S., Liu, Y., & Deng, L. (2019). Effects of an outpatient diabetes self-management education on patients with type 2 diabetes in China: a randomized controlled trial. *Journal Of Diabetes Research*, 2019. https://doi.org/10.1155/2019/1073131
Point	**Description**
Broad Topic Area/Title	Determining the effects of diabetes self-management education (DSME) with type 2 diabetes
Problem Statement	The study addresses diabetes self-management education and its effectiveness in diabetes type 2 management.
Purpose Statement	The purpose of the study is to assess the effectiveness of a simple outpatient diabetes self-management education program.
Research Questions	The research seeks to answer the question, "In diabetes type 2 patients, is diabetes self-management education more effective than routine education?"

Define Hypothesis	The hypothesis is "Diabetes self-management education diabetes self-management level in patients with type 2 diabetes."
Identify Dependent and Independent Variables and the Type of Data for the Variables	Independent variable: DSME General education General education plus DSME Dependent variable: Diabetic patient outcomes SDSCA-Summary of Diabetes Self-Care Activities PAIDs (Problem Areas In Diabetes) FBG- fasting blood sugar PGG-postprandial 2 h blood glucose, and HbA1c tests

Population of Interest for Study	The population of interest for this study were diabetes type 2 patients from the Cardiovascular Rehabilitation Clinic, Endocrinology Clinic, and Geriatrics Clinic at Xiangya Hospital, Central South University, between 2015 and 2017
Sample	The sample size was n=30, which were randomized into two groups in a ratio of 1:1; hence, the intervention group was n=30, and the control was n=30
Sampling Method	The participants were randomly selected and randomized into two groups.
Identify Data Collection	SDSCA and PAIDs data were collected using self-administered questionnaires with 7-point Likert scales. FBG, PBG, and HbA1c test results were collected from the cubital veins of patients, and the results were filled in report files for the RCT.
Summarize Data Collection Approach	The study utilized a quantitative data collection approach, including a self-administered questionnaire and naturistic data observation/collection from the patients.
Discuss Data Analysis	The study utilized SPSS statistical software, version 17.0, and used mean and standard deviation to describe the data. The chi-square test was used to evaluate the differences between the data groups. The tests of this study were evaluated and compared with data collected at the beginning of the study.

Summarize Results of the Study	The results show that the SDSCA and PAID, FBG, PBG, and HbA1c tests changed significantly compared to the results before the implementation of this study. The results show that short-term diabetes self-management education can effectively improve the level of self-management, psychological condition, and glycemic control in patients with type 2 diabetes.
Summary of Assumptions and Limitations	The assumption in the study was that patients recruited would be included in the study until its completion. This study has various limitations, especially related to the sample. The patients were limited to a particular location and environmental resources (patients in an outpatient clinic are from within a locality), and there were limited statistical tests. In addition, the sample was small, making the data generalization difficult.

Ethical Considerations

Ethical considerations in research are vital to ensure the applicability of the study results to the general population. Overall, conflict of interest, such as funding, should be declared by the study's authors. Grady (2018) notes that randomized control trials are the most applied type of study in clinical interventions, and their ethical considerations are thus vast. There are various ethical considerations in sampling. Participation and informed consent with full disclosure could be ethical considerations in this study. The study participants should not be affected by the study, such as failure to give them known effective interventions and harming patients

(Grady, 2018). The study used single-blinding, and there was a need to disclose enough information for the study and conceal some information for its effective implementation.

Ethical considerations in data collection and analysis entail understanding the patients and the appropriateness of the collection and analysis methods for the identified variables. The data collection methods should also coincide with the objectives/aims of the study. For example, in this study, the researchers collected data such as HbA1c tests directly from the patients and used a self-administered questionnaire for PAIDs. The researchers also used chi-square to test the inter-group differences. These data collection and analysis methods are pertinent to the study objectives and hypothesis and assist in testing them. In addition, the data collection methods should retain scientific rigor and be reliable; hence, these methods were subject to reliability and validity testing before their implementation. The Cronbach's alpha test result for the questionnaires' internal consistency to test their reliability is included in the study (Zheng et al., 2019). Zabor et al. (2020) note that ethical considerations in publishing results include selecting the correct journals to publish with, considering the research consumers and the journal's reputation. The results must also be evaluated and peer-reviewed before publication (Masic et al., 2014). Researchers should ensure the study fulfills all ethical requirements through an internal review by an internal review board. Ethical considerations also ensure the protection of the participants.

References

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