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Article Critique

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Title

The selected article is summed up in 13 words. It identifies the nature of the research conducted and falls within the bracket of the favorite word limit. It equally consists of dependent and independent variables besides clearly highlighting the target population. Here, the dependent variable is "mental health" while "physical activity and sleep quality" is the independent variable. Also, "college students" is the study or target population. Thus, the title used is good; it succinctly suggests critical variables and the study population.

Abstract

Although the abstract did not contain the research questions, the author did include the problem statement examining associations together with physical activity interactive effects as well as quality of sleep concerning mental health for college students in India. The abstract identified the method used as binary logistic regression models. Additionally, the fourth line of the abstract mentioned the technique of data collection as questionnaires. The three questionnaires were completed by 617 (314 men) college students between 18-30 years of age from both genders. The participants who completed the sleep quality, mental health, and physical activity fields were selected from different colleges in India.

Moving on, the abstract equally highlights the results of the study. It revealed that 51% of the participants had low physical activity, and an equal proportion had poor sleep quality. Also, they showed ¹the prevalence of anxiety (30%) was more than that of depression (18%). The results showed that physical activity levels of participants were significantly and inversely associated with depression and anxiety scores from the odds ratio calculations. Also, they indicated that low quality sleep is positively related with depression and anxiety.

Introduction

Statement of the problem

The article under critique clearly labels the introduction section just after the abstract. The 2nd paragraph of the introduction mentions the problem. Furthermore, authors cite other reports which demonstrated that depression and anxiety were the most common mental health complaints amongst university students. Thus, the research offers an in-depth insight into the problem by providing facts relating to the impact of anxiety and depression on college students' mental health. Therefore, I would conclude that the introduction section was labeled, and the problem was stated unambiguously, providing specific knowledge to the topic.

It easy to identify from the introduction that the problem statement focused on its subject matter through paragraph 2, which provided background information to ascertain that the reader was aware of the general problem besides specific issues the authors are addressing. For example, mental health is the exclusive problem of anxiety and depression among college students on their mental health. The problem statement cites physical activity and lack of sleep disturbances as possible solutions to the problem. Therefore, all of the elements were clearly stated; thus, the problem statement provided a convincing basis upon which a new study could be based. Also, the study used statistics and definitions that demonstrated direct support to the topic with the mentioned solutions.

At no point do the article's researchers under critique mentioned the problem being connected to ways their study could be of significance to nursing, but I believe it can be in one way or the other. This is because research is central to the continuous development of knowledge in nursing. Therefore, the educational experiences of upcoming nursing apprentices could be

improved by the study's data. Hence, enhancing these students' education in how the quality of sleep and physical activity can positively affect mental health.

There is a good match between research problem together with paradigm and methods used. The article under critique entailed representation and data analysis in terms of numbers; hence it used a quantitative approach, which is generally associated with the positivist paradigm. The study also used questionnaires as an instrument that saw participants self-report on variables such as physical activity and sleep quality, which can not be directly observed. This was in line with quantitative research methods, which necessitate using a scientific method of examination involving measurement. The technique should also involve a theoretical or empirical basis for the target population and samples' investigation. Hence, the quantitative approach used in the study was appropriate.

Hypothesis or Research Question

In the last paragraph of the introduction section, this study mentions the hypothesis as "physical activity and sleep quality have a significant effect on mental health in college students." Additionally, study's objective and aim were provided in the last paragraph of the introduction. The study did not formally state the reach question. Conceivably the authors felt that the research was more specific to the population and adequately specific to the primary variables. The overall hypothesis was online with existing knowledge since the article explained other reports that addressed the same issues. Nonetheless, it intended to distinguish itself, particularly to the problem as well as sample.

Literature Review

In the study, the article provided keywords accompanying mental health, sleep quality, college students, and physical activity level, which were utilized to conduct the research. The

publication date was provided as of January 26, 2019. Accompanying the review was a wide-ranging reference of thirty-four citations, of which the earliest was 2001 and the latest 2017. Notably, most references were less than ten-years-old since their publication. Similarly, the type and source of literature used were primarily primary sources because the researcher presented original empirical evidence in the article.

The authors of this article presented selective citations to deliberate the significance of the research. Besides, they gave a fair evaluation of them. Hence, in my view, the report gave a state-of-the-art synthesis of evidence on research problem. Although they may have incorporated older citations, their credibility was great since they were drawn from valuable educational journals and alternately applied sciences. The summary of the findings clarified the study's need, and all contributed to the problem and related well to nursing practice. The contextual information expanded upon concluded that breaching between physical activity together with sleep quality educational needs among nursing students was evident. Therefore, it identified the need to develop a curriculum incorporating health facts pinpointed by these two aspects.

Conceptual/theoretical framework

The researchers satisfactorily defined only vital concepts, which included the keywords. Nevertheless, conceptual definitions did not adequately define other variables such as "college students." Although an excellent conceptual framework helps identify the concepts under study and the relationship that exists between them, it seems, in my opinion, the researchers did not make any theoretical framework for this study. Likewise, neither was its absence justified.

Method

Protection of Human Rights

The second paragraph under the methods section demonstrated will to participate in the study. It mentions that the researchers received informed consent from the participants, and no force was used, but voluntary participation. Also, the study successfully received ethical approval from the Institutional Ethics Committee to undertake the research. In my view, this study was designed to minimize risk since an exclusion criterion was used to select participants. Although it was not mentioned in the study how participants' benefits were maximized, I believe that upcoming nursing students' clinical competence would be improved.

Research Design

After reading the article under critique two times, at this juncture, I should mention that the researchers did not mention the use of any particular research design. However, this article's problem statement stated that "To examine..."; hence, it is evident that the article is using an exploratory research method. Therefore, I would assert that the presence of a predetermined design is often not established or found. This is because the primary purpose of an exploratory study is to formulate the research problem. Thus, although the article did not mention any predetermined design, in my opinion, if the researchers used a nonexperimental design in the form of a survey, it would equally be the most rigorous possible design used. Bearing in mind that this study aimed to examine, its objective would be to acquire novel concepts linked to the research problem, and I assume this was realized.

Affirmative, the researchers made the appropriate comparison to enhance the interpretability of the findings. They used tables to present visual interpretation while evaluating the collected data. Likewise, the researchers used an adequate statistical test to indicate the relationship and significance between individual features. Although the article does not mention

the study's timeline and data collection points because the study was conducted in universities in New Delhi, India, I still believe the quantity of data collection points was suitable.

Since the participants were informed of the study's objectives, they could have understood the aims by predicting the study's motive resulting in behavior changes concerning questions. Therefore, I do not think the design minimized biases and threats to internal construct. Also, since questionnaires are progressively developed over time, the measurement procedure did have sturdy construct validity. No blinding or attrition might have occurred since all participants were involved in the study voluntarily; hence they could opt-out at any point in time.

Population and sample

The article uses complete detail to describe the population and the sample size as 617 college students, aged between 18-30 from New Delhi, India. These students met all the inclusion criteria, such as fluency in the English language and following instructions. Also, the article used Table 1 to present relevant characteristics of the 617 students. These included gender (314 males and 303 females), physical activity level (low, moderate, high).

Although the sample design is not stated, I consider the selected sample for the study represented a convenient college students sample of various departments of Jamia Islamia, in New Delhi, India numbering 617 in total. Nonetheless, I am acquitted that using this form of sampling design enhanced the representativeness of the sample. This is because the degree to which a sample mirrors the population it was drawn from determines representativeness, but convenience sampling does not represent the whole population. Accordingly, the use of convenience sampling exposed the study to a high susceptibility level of sample biases.

The required sample size may increase as the number of variables under the study surges. The use of extraneous variable counting level of education, type of residence, and years of

schooling influenced college students' mental health; hence, a size of 617 participants was adequate. The article did not mention using power analysis to determine the necessary sample size; neither was it apparent.

Data collection and measurement

As previously indicated, the authors provided a congruent definition to some keywords used in the study but failed to avail conceptual definition to college students. Also, the researchers used questionnaires to operationalize critical variables. The article also indicated that participants were given room for quantitative comments, which permitted them to self-report on these variables. Since the use of questionnaires is comparatively cheap and easy to administer in exploratory research, I believe this was the best possible method. In the meantime, the article did not provide adequate justification.

The study used questionnaires as a specific instrument since it was based on the participants' knowledge; thus, I consider it the right choice. Nonetheless, if the researchers needed to acquire more description, they should have used interviews as an alternate method of data collection.

The ability of an instrument to consistently and accurately measure the concept under study underwrites reliability. In contrast, an instrument's ability to quantify what it is intended to measure is the validity. Based on this understanding, I believe the questionnaires unwaveringly yielded valid results. However, it was not easy to establish the questionnaire's degree of dependability or consistency since the researchers did not mention any information about the questionnaires.

Procedures

Since this study was nonexperimental, no interventions were used; hence the rest of the questions are not applicable. Although no interventions were used, biases in the study were reduced by using inclusion criteria upon which participants were required to meet specific prerequisites. The article does not explicitly address the staff involved in data collection.

Results

Data analysis

The generalized hypothesis was that level of physical activity as well as sleep quality significantly affected mental health of university students. Thus, analysis was conducted to establish whether mental health problems intensified or decreased concerning various variables of the study. Since the sample group is independent, and a t-test was used on the students to output the mean aptly, apposite statistical methods were utilized. Subsequently, the article did not mention whether confounding variables were controlled or addressed, but it stated the use of SPSS to compute results. No intervention studies to treat analysis was performed since there was no intervention group. The study entailed all components of a rigorous exploratory study; hence it had no missing values.

Findings

The article presented information concerning the statistical significance, but it did not address the effect size. The study demonstrated easily summarized and easy to read tables. There were no figures whatsoever. Since the article did not address the effect size, the findings were not conducive for meta-analysis.

Discussion

Interpretation of findings

The article used several studies or past research articles for discussion within the same conceptual framework of positive mental health. There was also a thorough discussion about the context of former studies. This study justified causal inferences of mental health throughout the literature review besides furthering prior studies' findings.

The article offered a narrow scope into clinical significance, stating that college students' use was relevant for larger issue concerning global public health. The researchers perceived few limitations, but the interpretations were temperately well-founded. Had it addressed and controlled many variables, the viability of the study would have increased. The article also discussed the issue of generalization by appealing to further studies to generalize its conclusions broadly.

Implications/ recommendations

The researchers did not discuss the implications of further study, but it did mention that other studies could clarify relationship between sleep quality, physical activity levels as well as mental health. Thus, the authors did not present reasonable and complete implications.

General Issues

Presentation

Although the abstract did not fall within the recommended word limit, the report was written to allow critical analysis to be performed. The study did not exhibit such a flowchart even though it was current and not an intervention study. The abstract and tables in the study made the report findings accessible to practicing nurses.

Researcher credibility

The article did not mention the researchers' specializations; thus, this might not have improved authors' confidence in the findings together with interpretations presented.

Summary Assessment

This study's findings are valid as they are backed by a panel of researchers who believed their study could be the basis of other researches in the future. Thus, I have much confidence in the truth value and results. Although it offered limited scope to its findings to nursing practice, the study is informative towards upcoming nursing students.

Reference

Ghrouz, A. K., Noohu, M. M., Manzar, M. D., Spence, D. W., BaHammam, A. S., & Pandi-Perumal, S. R. (2019). Physical activity and sleep quality in relation to mental health among college students. *Sleep and Breathing*, 23(2), 627-634.

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