International Journal of General Medicine

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LETTER

Population awareness of coronary artery disease risk factors in Jeddah, Saudi Arabia: a cross-sectional study [Letter]

This article was published in the following Dove Press journal:
International Journal of General Medicine

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Dear editor

The study titled "Population awareness of coronary artery disease risk factors in Jeddah, Saudi Arabia: a cross-sectional study" by Almalki et al[1] is of much significance, due to the high prevalence of the disease in the region. The objective was to assess public awareness of risk factors for coronary artery disease. The authors did an extensive literature search on the prevalence and risk factors of the disease. As the study tackles a major population health problem, we hope the authors will clarify the following points.

No information about the justification of the sample size was included in the study. Inappropriate sample size may affect generalization of the results.[2] The authors mentioned that the questionnaire was not validated, but the validity of the tool is very much important in this type of study.

The operational definition given for physical activity is "at least 3 minutes' walking 5 times a day", but 15 minutes/day is appropriate only for vigorous activity, as per the World Health Organization.[3]

It is more appropriate to compare median rather than the mean awareness scores (Table 2. Means and SDs are not appropriate statistics for variables with yes/no categories. Also, a normality test is inappropriate for such variables.

The authors repeatedly mentioned in the abstract, results, and discussion that the overall awareness scores for participants were significantly positively correlated with awareness of each risk factor. However, awareness score for each risk factor is a component of "total awareness score". One of the main assumptions of correlation is that variables should be independent, and hence the correlation coefficient calculated is not appropriate.[4]

An independent-sample *t*-test is used to compare mean awareness scores in Table 4, which is not an appropriate test for data that are not normally distributed. The comparison of mean/median scores is to check whether differences observed are statistically significant or not, not to find the correlation. Mean test results are wrongly interpreted as "significant correlation" in Table 4. The authors' misinterpretation in the second-last paragraph of the discussion (p 67, lines 3–7) may lead to the wrong conclusion by the reader.

Table 2 shows that the dependent variable is mean awareness score and the independent variables are socio-demographic characteristics. Equal extent of grouping variable has no role on significance/non-significance of mean of the testing variable. Implies,

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http://doi.org/10.2147/IJGM.S208695

absence of statistically significant differences in mean scores between the demographic characteristics not indicate equal extent of participant selection from different social, educational, and occupational classes of the population. At the end of the article many limitations were mentioned, those are necessarily to be followed while conducting any scientific research.[5]

Overall, we appreciate the authors for their initiative. Inappropriate methodology, statistical method and interpretation of data may lead to fallacious conclusions.

Disclosure

The authors report no conflicts of interest in this communication.

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