A Study to Explore the Effectiveness of an Educational Program on Awareness of Cancer Signs, Symptoms, and Risk Factors Among School Students in Oman

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Abstract : Background: Several studies suggest that most school-age adolescents are poorly informed on cancer warning signs and risk factors. Providing adolescents with sufficient knowledge would increase their awareness in adulthood and improve seeking behaviors later. Significant: The results will provide a clear vision in assisting key decision-makers in formulating policies on the students' awareness programs towards cancer. So, the likelihood of avoiding cancer in the future will be increased or even promote early diagnosis. Objectives: to evaluate the effectiveness of an education program designed to increase awareness of cancer signs and symptoms risk factors, improve the behavior of seeking help among school students in Oman, and address the barriers to obtaining medical help. Methods: A randomized controlled trial with two groups was conducted in Oman. A total of 1716 students (n=886/control, n= 830/education), aged 15-17 years, at 10th and 11th grade from 12 governmental schools 3 in governorates from 20-February-2022 to 12-May-2022. Basic demographic data were collected, and the Cancer Awareness Measure (CAM) was used as the primary outcome. Data were collected at baseline (T0) and 4 weeks after (T1). The intervention group received an education program about cancer's cause and its signs and symptoms. In contrast, the control group did not receive any education related to this issue during the study period. Non-parametric tests were used to compare the outcomes between groups. Results: At T0, the lamp was the most recognized cancer warning sign in the control (55.0%) and intervention (55.2%) groups. However, there were no significant changes at T1 for all signs in the control group. In contrast, all sign outcomes were improved significantly (p<0.001) in the intervention group, and the highest response was unexplained pain (93.3%). Smoking was the most recognized risk factor in both groups: (82.8% for control; 84.1% for intervention) at T0. However, there was no significant change in T1 for the control group, but there was for the intervention group (p<0.001), the highest identification was smoking cigarettes (96.5%). Too scared was the largest barrier to seeking medical help by students in the control group at T0 (63.0%) and T1 (62.8%). However, there were no significant changes in all barriers in this group. Otherwise, being too embarrassed (60.2%) was the largest barrier to seeking medical help for students in the intervention group at T0 and too scared (58.6%) at T1. Although there were reductions in all barriers, significant differences were found in six of ten only (p<0.001). Conclusion: The intervention was effective in improving students' awareness of cancer symptoms, warning signs (p<0.001), and risk factors (p<0.001 reduced the most addressed barriers to seeking medical help (p<0.001) in comparison to the control group. The Ministry of Education in Oman could integrate awareness of cancer within the curriculum, and more interventions are needed on the sociological part to overcome the barriers that interfere with seeking medical help.

Keywords : adolescents, awareness, cancer, education, intervention, student

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