Physical activity and cervical cancer screening in Malaysia: evidence from a population-based study

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ABSTRACT:

Introduction: Cervical cancer is the fourth most frequently diagnosed cancer and the fourth leading cause of cancer death in women worldwide in 2020. Despite cervical cancer being potentially preventable, it is the third most common cancer among women in Malaysia. Screening is one of the most cost-effective strategies to control and manage this disease. Studies have shown that women who engage in high levels of physical activity have higher rates of cancer screening, including the Papanicolaou test (pap smear). Therefore, this study aimed to determine the prevalence of receiving a pap smear test in the past three years and its association with physical activity after adjusting for potential confounding factors.

Methods: A secondary data analysis was conducted utilising a survey subset of adults aged 18 and above from the National Health and Morbidity Survey (NHMS) 2019. Data collection was conducted via face-to-face method by trained research assistants using mobile tablet devices based on a questionnaire system application developed. Sociodemographic factors included age group, locality, ethnicity, marital status, education level, employment, household income category and physical activity. Physical activity was assessed using a validated short version of the International Physical Activity Questionnaire (IPAQ). A total of 5,687 female respondents aged 18 and above were analysed using logistic regression analysis. All analyses were performed using STATA version 14 (Stata Corp, College Station, Texas, USA), taking into consideration the sample weighting and complex sampling design.

Results: The analysis included 5,687 female respondents, representing an estimated 10.3 million Malaysian female adults aged 18 and above. Overall, 35.2% (95%CI 33.2, 37.3) of respondents received a pap smear test within the past three years. Respondents who reported higher physical activity level had a higher likelihood of receiving a pap smear test (OR 1.43; 95%CI 1.14, 1.80). Similarly, respondents aged 35-59 (OR 1.72; 95%CI 1.36, 2.18) and those from rural localities (OR 1.33; 95%CI 1.09, 1.64) had higher odds of receiving a pap smear test. In contrast to married respondents, single respondents (OR 0.04; 95%CI 0.02, 0.07) and widowed/divorcee respondents (OR 0.67; 95%CI 0.53, 0.85) were less likely to receive a pap smear test.

Discussion: Our study found that physically active adults have higher rates of receiving a pap smear test in Malaysia. However, the overall prevalence of cervical cancer screening remains low. Measures should be taken in our country to increase cervical cancer screening coverage. The introduction of alternative cervical cancer screening methods, such as Human papillomavirus (HPV) self-sampling test, may increase cervical cancer screening and early detection. Health promotion programmes and policies to raise awareness about the importance of cervical cancer screening should be strengthened and targeted toward rural residents, single women, and widowed/divorcees.

KEYWORDS: