UNDERSTANDING ABOUT PAP SMEAR AMONG MALAY WOMEN

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Abstract- The purpose of this study is to assess the knowledge, attitudes, practices and cultural beliefs of urban Malay (Muslim) women towards Pap smear screening. A questionnaire-based survey of 300 Malay women in the Gombak district of Selangor, Malaysia, which evaluated the socio-demographic characteristics of respondents, knowledge of Pap smear testing, attitudes and cultural beliefs was distributed. Generally, the findings reveal that respondents had a good understanding of the purpose of Pap smear screening with 82.7% knowing that it can detect the early development of cervical cancer and 64% understanding that Pap smears can detect human papillomavirus (HPV) or other sexually transmitted infections (STI). 70% of the respondents believed that Pap smears are recommended to women who are married and 44.6% believed that Pap smears are recommended only to those who have had children. Generally, the respondents possessed good knowledge of Pap smear screening and its purpose. However, Malay cultural and religious beliefs and attitude regarding sexual activity and women's chastity directs that only those who are married with children are recommended for Pap smear screening. This cultural belief may be what contributes to low participation in Pap smear screening programmes.

Keywords- Malay, Health, Cervical Cancer, Cultural Beliefs.

I. INTRODUCTION

The aim of Pap smear screening is to decrease the mortality rate caused by cervical cancer [1]. To do this, women's involvement in Pap smear screening must be increased by providing them proper health education and aggregative awareness. It takes a couple of years cervical cancer to form. If screening is done regularly and followed-up accordingly, it is possible to prevent death from cervical cancer [2]. The national South African and provincial Eastern Cape Policy suggests having Pap smear screening at least three times in one's life time [3].

Worldwide, cervical cancer has become an issue of concern in public health areas because of its cruelty. It is estimated that approximately 440,000 women are affected by this cervical cancer every year all around the world [4]. The situation is even crucial for women of developing and less developed countries. [2] state in their research that in facing the challenge of cervical cancer, less developed countries are 15 years behind the developed ones. Cervical cancer is highly widespread in most developing countries of South and Central America, Sub-Saharan Africa and also in South and South-east Asia [5]. This is happening because these countries lack the infrastructure and trained man power in providing Pap smear screening to adult women as they are unable to manage the costs in organizing follow-up and surveillance programmes. Being a developing country, Malaysia started the programme of cervical cancer screening for adult women aged between 20-65 at the end of the 1960s [6]. Most of the studies on Malaysian population show that the main reason for lower rate Pap smear screening is mostly cultural. Apart from the cultural variables, socio-demographic factors like income or education are also associated with not having Pap smear more frequently.

Cervical cancer is an inevitable disease unless it can be detected early [7]. In this regard, Pap smear screening is a test for women who are sexually active. This test helps them in early detection of cervical cancer. Medical science suggests that regular screening is able to reduce the mortality rate of females by detecting cervical cancer earlier through Pap smear test. In Malaysia, though this screening started in 1969 the rate of up taking is not significant among eligible females in the country [6].

Previous research also found that the cause of low up taking attitudes towards Pap smear screening in Malaysia is highly influenced by the inhabitants' cultural beliefs and customs. Specifically, religious attachment frames the social customs of this society which enhances increases the attitudes towards having Pap smear screening [8]. Besides cultural beliefs such as confusion or hesitation, the women of this society do not have ample knowledge which hinders them from getting Pap smear screening.

II. LITERATURE REVIEW

A number of empirical work has been found regarding Pap smear and related works both in Malaysia and out of Malaysia. [9]state a number of causes of having low numbers of Pap smear screenings in developing countries. They mention that lack of education is the cause why women have poor knowledge about Pap smear screening. Poor education level among the population in a developing country shapes the entire living standards, their health care services and health seeking behaviour while preventing them from knowing the details of Pap smear screening and its procedures.

A number of researchers, e.g., [10] conducted a research in Hong Kong. In this paper, it is claimed that

compared to many other countries, in Hong Kong, the cervical cancer rate is high and conversely, the screening rate is low. This paper assumes that if it was possible to know the causes of not going for screening, it would be good for the women to improve their health situation. Keeping this in mind, they used both the FGD (of both screened and non-screened Chinese women) and semi-structured interviews (with 28 doctors) to get information related to the socio-cultural factors that prevent women from getting screened. The findings indicate that their knowledge of screening and knowledge of risks vary in terms of their educational background. Besides, it was found the women were concerned about their social values and cultural issues which included thinking about their modesty and embarrassment during the screening process [10].

A research by [11] was conducted among registered female nurses of Srinagarind University Hospital in Thailand to explore their knowledge, attitudes and practices in cervical cancer area. It was found that 81.8% of the total respondents considered sexual relationship at an early age as the cause of cervical cancer. Similarly, 85.6% of them mentioned multiple sexual partners as the cause of this kind of cancer among females. This research also discovered that approximately 50% of them did not know that Pap smear screening is necessary once they become sexually active.

The paper by [1] tried to gauge the knowledge level of Swedish women regarding Pap smear screening. They discovered that the level of knowledge was highly dependent on age. They stated further that though most of the participants were familiar with the concept of Pap smear screening, almost half (38%) of the respondents did not know for which cancer they need to do Pap smear screening. Controlled life style was considered a preventive behaviour in avoiding cervical cancer by nearly half of the respondents in this study.
The research by [3] was conducted on rural women of South Africa. In this paper, it is stated that cervical cancer is the second highest cause for women's deaths in South Africa. This is because of their poor health care system and also because of their misunderstanding about cervical cancer and its treatment. This paper confirms that in the Hewu sub-district of Eastern Cape, 18 clinics out of 24 have the opportunity of doing Pap smear screening, but these clinics do not have sufficient man power of doing so.

Another research on African women was conducted by [12]. These researchers conducted their research on female health professionals to know their knowledge and attitudes towards Pap smear screening. This paper discovers that these health professionals also require adequate knowledge. A questionnaire survey was done on 144 female health professionals of two clinics where Pap smear screening is done regularly. 91.7% of the respondents including nurses, doctors, pharmacists or laboratory scientists reported that they are familiar with the term 'cervical cancer'. Though 100% of the doctors knew the purpose of Pap smear screening, half of the respondents of other groups did not know the vital need for conducting Pap smear screening.

Researchers [13] did a research at Fatima Memorial Hospital in Lahore, Pakistan. A total of 192 women participated in this study. The average age of these respondents was 42 years and 44% of them had no formal education. In this research it was found that the reason for low Pap test taking in Pakistan is absence of awareness among the women. It was further discovered that among these 192 respondents, only 2.6% of them have taken their Pap test so far. In addition, this research states that 85% of the respondents agreed that if it is possible to identify the symptoms of cervical cancer, it is possible to survive against it. However, these respondents were not fully aware that a screen test named Pap test which can detect early cancer is available in their country.

The research paper by [14] states that it is not possible to understand Pap smear screening with a single factor. This statement is mostly true for developing and less developed countries. This paper states that socio-cultural norms, education and income, geographical location of residence, health care system of a country and other related factors combined can give the entire understanding of Pap smear screening of a country. Therefore, this study attempts to determine the knowledge and describe the attitudes of Malay women towards Pap smear test.

III. PARTICIPANTS AND METHODS

The investigation was a cross-sectional study. The target population was Malay (Muslim) women living or working in Gombak district of Selangor. Generally, Pap smears are recommended to women aged 21 and above, this is assuming that sexual activity begins around that age. However, as Malay women are Muslims Islam prohibits sexual relations before marriage. Despite that, in line with the anthropological objective of the study that aims to examine any Malay cultural impact on Pap smear practice, both single and ever married women were included in the target population.

Data collection was accomplished using interviewer-administered questionnaires designed to obtain relevant socio-demographic characteristics, knowledge, attitudes and cultural beliefs towards Pap smear screening.
The questionnaire was developed by the authors based on information in the literature on facts and misconceptions regarding Pap smear as well as socio-demographic information.

The questionnaire was pre-tested on a convenient sample of 30 women not included in the sample from the study area subjected to reliability tests then modified as necessary. As a result of this pre-test, some of the items on the questionnaire were discarded mostly due to ambiguity of these questions and having scored Cronbach's alphas of <0.7. In total, 24 items were retained out of the initial 48 items on the questionnaire. Cronbach's alphas for the Knowledge (8 items), Attitudes (10 items) and Cultural Beliefs (6 items) were 0.702, 0.72 and 0.79 respectively. All Knowledge, Attitudes and Cultural Beliefs items had response options as follows: 1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree and 5 = Strongly Disagree.

The sample size of 300 was calculated taking into consideration the following statistics obtained from the Malaysian 2010 Census: the district population in Gombak (682,226). Islam as the most widely professed religion in Malaysia (61.3%), sex ratio of the national population (1.06 male(s)/female (s)) and married women (59.6%). As the study was designed to assess knowledge, attitudes and cultural beliefs towards Pap smear among Malay women only, the sample size was calculated based on an estimated Pap smear prevalence of 60%, that is women who have married, are presumed to be sexually active and may have been recommended by their doctors to undergo a Pap smear test. Accordingly, a sample size of ~100 was calculated. The sample size of 300 subjects was randomly selected from different locations in the Gombak area via social media platforms and through the traditional face-to-face approach.

Data analysis was carried using SPSS (Statistical Package for the Social Sciences) Version 20. Mean scores were calculated for each item and the overall mean score for Knowledge was also calculated. Chi-square test was used to assess relationship between mean scores and socio-demographic variables. Mann-Whitney Tests and Kruskall-Wallis tests were applied to identify statistically significant differences in knowledge, attitudes, and cultural beliefs with demographic characteristics including age, marital status, employment status and educational status. Differences were also examined between those who have had Pap smears tests. Spearman's rho correlation analysis was also conducted with scale variables.

IV. RESULTS AND DISCUSSION

A. Socio-demographic Characteristics of Participants

The socio-demographic characteristics of participants are shown in Table 1. Of the 300 Malay women that participated in this study, information about age was available on 299 respondents. Approximately 70% of the participants were aged between 20-39 years. 67% of the participants were married. The majority of the participants were employed full time (74%) and 36.6% had some level of higher education.

Table 1 Socio-demographic characteristics of participants

Characteristic	N	%
Age (years)		
20-29	114	38
30-39	102	34
40-49	51	17
50-59	23	7.7
60-69	8	2.7
70-79	1	0.3
Marital Status		
Single	68	22.7
Married	201	67
Divorced	18	6
Widowed	7	2.3
Employment Status		
Full-time	222	74
Part-time	5	1.7
Self-Employed	27	9
Retired	2	0.7
Unemployed	43	14.4
Highest Education		
Primary	16	5.3
Secondary	111	37
Diploma	56	18.7
Undergraduate	84	28
Postgraduate	25	8.6

B. Characteristics of Pap smear Screening among Participants

Of the 300 participants, 294 women responded to the question "Have you ever had a Pap Smear?" of which 46.7% (140) responded with a "yes" and 51% (153) responded with a "no". Cross-tabulation, conducted to determine the frequency of Pap smear tests across women with different marital statuses, reveals that of those who have had a Pap smear test, two were single and 138 ever married (married/divorced/widowed). Of these 140 women, 12 tested positive. No statistically significant relationship was found between result of Pap smear tests and getting a Pap smear ($p = 0.121$).

In Malaysia, Pap smear tests are usually recommended to women who have recently delivered or otherwise recommended to those women who are considered high risk by their doctors. In light of this, results show that a statistically significant relationship existed between having children and getting a Pap smear test ($p<0.001$).

Employment status was found to have no statistically significant impact on getting a Pap smear ($p = 0.762$); however, educational status was found to be related to getting a Pap smear ($p = <0.001$).Frequency of Pap smears were also examined and results are shown in Table 2.

Table 2 Frequency of Pap smears

Frequency of Pap Smear	N	Percentage (%)
1-3	114	38.0
4-6	22	7.3
7-10	2	1.4
11 or more	2	1.4

Factors of age, number of children, employment status, educational status and Pap smear result did not influence frequency of pap smear experienced ($p > 0.05$).

C. Knowledge about Pap smear

Eight items with 1-5 scale responses were designed to elicit participants' general knowledge and understanding regarding Pap smears as a health care routine. As the study aims to ascertain the Malay women's perception regarding Pap smear as a screening process, the authors did not design the statements pertaining to the procedure or cervical cancer. Table 3 shows participants' responses to these items.

Table 3 Participants' Responses to Knowledge Statements regarding Pap smears

Item	Mean	Std Deviation
Pap smear tells you if you have a sexually transmitted infection (STI).	3.86	1.16
A Pap smear can detect early development of cervical cancer.	4.23	0.99
Women aged 21 to 65 should get Pap smears as part of their routine health care.	4.05	1.08
You must have a Pap smear every 3 years.	3.61	1.12
Pap smears are recommended to women who are married.	3.93	1.21
Pap smears are recommended only to those who have had children.	3.25	1.38
An abnormal Pap smear is positive for cervical cancer	3.54	1.09
A Pap smear is a preventive measure for cervical cancer.	3.88	1.23

*1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree and 5 = Strongly Agree

Study participants had good knowledge of the purpose of Pap Smears participants generally agreeing with all statements. Distinctively, the women agreed that Pap smears are recommended to women who are married which also correlates with the understanding that "Pap smears tell you if you have a sexually transmitted infection (STI)" ($p < 0.001$). The results of running a Spearman's rho correlation shows that in line with who Pap Smears are recommended to, there was a positive correlation between women who are married and those who have had children, $r = 0.54$, $n = 300$, $p < 0.001$.

For the purpose of understanding how knowledge varies across specific demographic groups, the variable "MeanK" was created representing the Mean Knowledge score for the women.

The results of running the Kruskall-Wallis test show that no statistically significant mean rank different in knowledge scores existed across the different age groups and employment status ($p > 0.05$). However, ever married women (married, divorced, widowed) scored higher than single women ($p = 0.020$). Educational status was also found to influence knowledge with women with just a secondary education found to have a higher mean rank value ($p > 0.001$).

The results of running a Mann-Whitney U Test reveal that there was a statistically significant mean rank difference in knowledge [$U = 7772.0$, $p < 0.001$] between those who have had a Pap smear (Mean rank = 167.99) and those who have not (Mean rank = 127.80).

D. Attitudes towards Pap smear

Ten statement items with 1-5 scale responses were designed to elicit participants' attitudes towards Pap smears as a health care routine. Table 4 shows participants' responses to these items.

Table 4Participants' Responses to Attitude Statements regarding Pap Smears

Item	Mean	Std Deviation
A Pap smear should only be conducted by a female doctor.	4.33	1.07
Getting a Pap smear is painful.	2.64	1.13
Getting a Pap smear is embarrassing.	3.00	1.37
Getting a Pap smear is costly.	2.46	1.06
My family encourages me to have a Pap smear.	3.34	1.24
My mother never had a Pap smear and neither have I.	2.50	1.39
A Pap smear is a private matter.	3.81	1.26
Advertisement for a free Pap smear would motivate me to get one.	3.94	1.09
A Pap smear will cause an unmarried woman to lose	3.24	1.38

her virginity.		
I am not comfortable with any medical procedures concerning my vagina.	3.34	1.29

*1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree and 5 = Strongly Disagree

Noteworthy is the women's agreement about having a female doctor conducting the pap smear examination and this also correlated with the women's attitude towards vaginal medical procedures ($r = 0.19$, $n = 300$, $p < 0.001$), embarrassment ($r = 0.23$, $n = 300$, $p < 0.001$), Pap smears being a private matter ($r = 0.32$, $n = 300$, $p < 0.001$) and the fear of a married woman losing her virginity via a Pap smear ($r = 0.26$, $n = 300$, $p < 0.001$). Generally, the women agreed that Pap smears are a private matter. Differences in attitudes were expected to be found between those who have experienced a Pap smear and those who have not. Results show that those who have had Pap smears were likely to disagree with the statements regarding Pap smears being painful and being costly ($p<0.001$). It was also found that women were likely to undergo a Pap smear if encouraged by family ($p<0.001$) and if the mother have never had a Pap smear. Although the participants agreed that advertisements for free Pap smears would serve as a motivation, statistically this did not differ between those who have and have not had a Pap smear ($p > 0.001$). The participants were uncertain if Pap smears can cause an unmarried woman to lose her virginity. Results of the Kruskall-Wallis test show a statistically significant difference in attitudes between the groups where on average; widowed women were more likely to agree that Pap smears jeopardise a woman's virginal status ($p < 0.001$).

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