

# Awareness of pelvic organ prolapse and attitude towards its treatment among Malaysian women

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## ABSTRACT

**Introduction:** The aim of this study is to determine the level of awareness of pelvic organ prolapse (POP) and factors that influence the attitude towards the treatment of POP among Malaysian women.

**Materials and Methods:** This was a cross-sectional study of 400 women from registered non-government organisations (NGOs) in Malaysia who voluntarily answered questionnaires distributed through Google form via emails. Data were analysed using descriptive statistics, independent t-test and one-way ANOVA test.

**Results:** Four hundred respondents participated in this study. The mean age was 40.42 years old (SD=12.566). The mean score for the studied population was 4.96 (SEM 0.124). Only 58 (14.5%) respondents obtained a score of eight or more, and 235 (58.8%) respondents scored between 4 and 7. The rest of 107 (26.7%) respondents scored 3 and less. There were statistically significant differences in the mean score for level of awareness between marital statuses, menopausal status, number of children and occupation. There were only 273 (68%) respondents who will seek treatment if they experience symptoms of POP. The most frequent reasons for not seeking treatment were unawareness of the availability of medical treatment for POP (69%).

**Conclusion:** Majority of the respondents have an inadequate level of awareness on POP. Although more than half of the respondents will seek treatment if they experience symptoms of POP, concerns raised by those who chose not to seek treatment should be addressed by a more effective public awareness programme. This includes the unawareness of the availability of medical treatment and the embarrassment to see medical practitioners.

## KEYWORDS:

*Knowledge, treatment-seeking behaviour, uterine prolapse*

## INTRODUCTION

Pelvic organ prolapse (POP) refers to a falling, slipping or downward displacement of different vaginal compartments and their neighbouring organs such as bladder, rectum or bowel.<sup>1</sup> It is a common disorder with the global prevalence of uterine prolapse reported to be between 2 and 20%.<sup>2</sup> Symptomatic prolapse was demonstrated by 118 (6%) of the

women in a population-based study of 2,001 women.<sup>3</sup> Vaginal prolapse affects quality of life negatively and is associated with urinary, bowel and sexual symptoms.<sup>4</sup> The main obstacles described by the participants were lack of information and feeling of shame, thus leading to a deficiency of knowledge about POP and delay in seeking health care services.<sup>4</sup>

Despite the prevalence of POP, many women are unaware of available treatment modalities. In a study by Shrestha et al.,<sup>5</sup> women with POP symptoms did not use health care facilities provided despite exhibiting a high level of knowledge on POP and having access to nearby hospitals. A community-based study in north India self-reported POP shows 57% of women received no treatment. Reasons for not accessing health care include uncooperative family members, lack of time and lack of money.<sup>6</sup> Another study showed reasons for not accessing health care include fear of disclosure due to social stigma, lack of funds and poor support.<sup>7,8</sup>

Healthcare providers may be able to enhance service quality and access, as well as resolve the obstacles that discourage women from pursuing POP treatment by examining their attitudes towards POP treatment. Several studies have specifically addressed the issue of POP awareness and knowledge in Nepal, Vienna and Moscow, the United States and the US/Mexico border, which demonstrated a gap in knowledge and awareness about POP, risk factors and treatment options.<sup>2,9-11</sup> Hence, the aim of this study was to assess the awareness regarding POP and attitudes towards treatment among Malaysian women.

## MATERIALS AND METHODS

This was a cross-sectional study involving women working in registered non-government organisations (NGOs) in Malaysia.

The list of registered NGOs was obtained from Malaysia Central portal ([http://www.mycen.com.my/malaysia/ngo\\_02.html](http://www.mycen.com.my/malaysia/ngo_02.html)) which listed all the registered NGOs in Malaysia. Every NGO was assigned a specific number, and NGOs were selected using a simple random sampling with Microsoft Excel. The inclusion criteria for the respondents were Malaysian women aged above 20 years old, and the exclusion criteria were pregnant women and those who were unable to understand the English language.

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In view of no local data on the prevalence of POP, the sample size estimation for this study was calculated based on the published data by Samuelsson et al.,<sup>12</sup> who reported that the prevalence of any degree of POP was 30.8% in a Swedish population of women aged 20–59 years old. Using OpenEpi software with a confidence limit of 5% and a confidence interval of 95%, the sample size obtained was 328. Considering 20% of possible non-responders, the minimum sample size was 394.

The questionnaire used in this study consisted of three parts. The first part was on the sociodemographic background of the respondents. The second part was ten items for the assessment of the level of awareness on POP. Eight items were adapted from Prolapse and Incontinence Knowledge Questionnaire (PIKQ) by Aparna et al.<sup>13</sup> PIKQ comprised two distinct, 12-item scales: a Urinary Incontinence scale to assess patient knowledge about urinary incontinence and a POP scale to evaluate patient knowledge about POP. However, a 10-item questionnaire was created to suit the studied population by using eight adapted items taken from the PIKQ and additional two other items to achieve the objective of this study. There is a mixture of correct and incorrect statements within the 10-item. The respondents will need to answer whether they 'agree', 'disagree' or 'not sure' with the statement given for each item. One mark was awarded to each correctly answered item. The total number of correctly answered items for each participant was recorded. A higher score meant a higher level of awareness on POP.

The third part was on the assessment of their treatment-seeking behaviour for POP. This part had three main questions: whether they have any of the symptoms of POP listed, whether they think it is normal to have any of the symptoms, and whether they will seek treatment if they have any symptoms. If they answered 'no' to question Number 3, they will need to answer another question to justify why they would not seek treatment.

Content validity was performed by five Obstetrics and Gynaecology Specialists, and face validity assessment was performed by five women attending the outpatient clinic before its use in this study. It was then tested in 20 healthy women without any symptoms of POP to determine whether the questions were understandable.

The first 50 NGOs from the randomised generated list were selected and invited to participate in this study, but only 27 NGOs responded and agreed to participate. The questionnaire was distributed through emails, which they subsequently shared with women working in their organisation. Participation was voluntary (convenience sampling). A patient information leaflet, including the inclusion and exclusion criteria, was provided on the front page of the questionnaire, and those who were suitable and agreeable to participate in this study proceeded to answer the questionnaire.

The data were analysed using Statistical Package for Social Science (SPSS) version 20.0 (SPSS Inc, Chicago, IL). All the independent variables were classified into categorical and

was presented in the form of absolute number and their corresponding percentages values. Analysis using independent t-test and one-way ANOVA with post hoc test Bonferroni's procedure was used to determine the association between mean score and studied variables. The significant level is preset at  $\alpha=0.05$ .

Ethics approval was obtained from the Universiti Teknologi MARA Research Ethics Committee (Reference number: 600-IRM(5/1/16)).

## RESULTS

A total of 400 respondents participated in this study. The mean age was 40.42 (SD 12.57) years old. Table I shows the demographic details of the respondents.

There were 10 items to assess respondents' awareness of POP. The number of respondents who answered correctly for each statement is shown in Table II. There is no cut-off point to interpret the score; however, the higher score they get indicates the higher level of awareness. The mean score for the studied population was 4.96 (SEM 0.124). Only 58 (14.5%) respondents obtained a score of 8 or more, and 235 (58.8%) respondents got a score between 4 and 7. The rest of 107 (26.7%) respondents scored  $\leq 3$ .

From this study, there was a low incidence of self-perceived symptoms of POP. There were 111 (27.8%) respondents who reported having at least one of the symptoms enquired. The commonest symptom was incomplete voiding (65, 16.3%), followed by feeling something was coming down per vagina (58, 14.5%) and sense of heaviness in the vagina (51, 12.8%). The majority of the respondents (365 respondents, 91%) agreed that it is not normal to have POP symptoms. However, only 273 (68%) respondents will seek treatment if they experience POP symptoms. It was also found that the commonest reason for women not seeking treatment was unaware of the existence of medical treatment (69, 43%) and embarrassment to see a doctor (46, 28%).

Table 3 compares the mean score of the level of awareness for each of the demographic factors. There were statistically significant differences in the mean score for level of awareness between marital statuses, menopausal status, number of children and occupation. The mean score for single women is significantly lower than for married women (mean difference, MD: -0.985, 95%CI: -1.75, -0.22;  $p=0.004$ ). Menopausal women had significantly higher mean score than non-menopausal women (MD: 0.79, 95%CI: 0.22, 1.35;  $p=0.007$ ). It also showed that the mean score of nulliparous women is significantly lower than multiparous women (MD: -1.302, 95% CI: -2.06, -0.54;  $p<0.001$ ), the mean score for nulliparous women is significantly lower than the grand multiparous women (MD: -1.520, 95%CI: -2.47, -0.57;  $p\leq 0.001$ ). The mean score of women with a professional career is significantly higher than women with a non-professional career (MD: 1.094, 95%CI: 0.3, 1.89;  $p=0.002$ ). No significant differences in the mean score between different groups of educational status and monthly income.

**Table I: Demographic detail of the respondents**

|                               | Number, n (%) |
|-------------------------------|---------------|
| Marital status                |               |
| Single                        | 95 (24)       |
| Married                       | 292 (73)      |
| Divorcee                      | 7 (2)         |
| Widowed                       | 6(1)          |
| Number of children            |               |
| Nulliparous                   | 115 (28.7)    |
| Para 1                        | 29 (36.0)     |
| Para 2-4                      | 182 (81.5)    |
| Para 5 or more                | 74 (18.5)     |
| Attained menopause            | 95 (24)       |
| Educational status            |               |
| Secondary school              | 50 (13)       |
| College/university            | 350 (87)      |
| Household income              |               |
| Less than RM3000 <sup>a</sup> | 117 (29)      |
| Between RM3000 and RM5000     | 151 (38)      |
| More than RM7000              | 132 (33)      |
| Occupation                    |               |
| Professional <sup>b</sup>     | 114 (28)      |
| Non-professional <sup>b</sup> | 159 (40)      |
| Housewife/unemployed          | 38 (10)       |
| Student                       | 48 (12)       |
| Retired                       | 41 (10)       |

<sup>a</sup>Professional is defined as job that requires specialised knowledge and advanced skills in an area, requiring certification such as a college degree. Non-professional is defined as jobs that often manual or repetitive in nature, do not require any college degree and rely on on-job training. <sup>b</sup>RM is Ringgit Malaysia, which is the Malaysian’s currency

**Table II: Frequencies of correct answers to 10-item assessment on awareness on pelvic organ prolapse**

| Statement  | Number, n (%) |
|--|---------------|
| Pelvic organ prolapse is more common in younger woman than in older women. (FALSE)               | 119 (29.8)    |
| Increased number of giving birth increases the risk of pelvic organ prolapse. (TRUE)             | 212 (53.0)    |
| Pelvic organ prolapse can happen at any age. (TRUE)  | 270 (67.5)    |
| Certain exercise can help reduce the risk of pelvic organ prolapse. (TRUE)                       | 315 (78.8)    |
| Symptoms of pelvic organ prolapse may include vaginal heaviness. (TRUE)                          | 209 (52.3)    |
| Frequent heavy lifting can lead to pelvic organ prolapse. (TRUE)                                 | 321(80.3)     |
| Obese women are more likely to get pelvic organ prolapse. (TRUE)                                 | 111(27.8)     |
| Infections of the private part can cause pelvic organ prolapse. (FALSE)                          | 82(20.5)      |
| Pelvic organ prolapse is the descent of the uterus, bladder or rectum through the vagina. (TRUE) | 211 (52.8)    |
| Surgical removal of the uterus is the only treatment for pelvic organ prolapse. (FALSE)          | 133 (33.3)    |

**DISCUSSION**

This study found that the overall awareness on POP among the studied population was still inadequate, with the mean score for level of awareness was only 4.96, together with the observation of the unsatisfactory pattern of score that only about a quarter of the respondents scored a reasonably good mark of ≥8. This finding was similar to other studies that also demonstrated a similar pattern of low knowledge and awareness on POP. Just 9.1% of 331 married women in Suklagandaki municipality, Tanahun, had a clear understanding of uterine prolapse and its risk factors, according to a survey.<sup>2</sup> In other studies, the percentage of women who had adequate knowledge of POP range from 20% to 65%.<sup>14-17</sup> Although the questionnaire used to evaluate the knowledge and awareness is not standardised in all these similar studies, the similar findings still emphasise that there is a lack of awareness on POP among women, and Malaysian women are included.

Based on the assessment, the items on risk factors and treatment for POP had the lowest percentage of correct answers. Only a quarter of the respondents were aware that POP is more common among older women than younger women, it is not caused by infection, and obesity increases the risk of POP. Also, only a third of the respondents were aware that surgery is not the only treatment option for POP. These findings are consistent with a systematic review that included nineteen studies. It reported that most women have a gap in the knowledge of pelvic floor muscle dysfunctions, cannot identify risk factors for these disorders and do not understand their treatment options.<sup>18</sup>

Therefore, it is crucial to include information on risk factors and causes of POP during the health education programme to empower them with adequate knowledge that hopefully will translate to a healthier lifestyle to reduce their risk of developing POP. Another aspect that should be integrated into any health education programme or patient education

Table III: Comparison of mean score of the level of awareness for each of the demographic factors

|                               | n   | Mean score (SE) | t or F (df)               | Mean difference (95% CI) | p-value |
|-------------------------------|-----|-----------------|---------------------------|--------------------------|---------|
| Marital status                |     |                 |                           |                          |         |
| Single                        | 95  | 4.21 (0.244)    | 3.995 <sup>a</sup> (3)    |                          | 0.008*  |
| Divorcee                      | 7   | 4.71 (1.063)    |                           |                          |         |
| Widow                         | 6   | 5.50 (1.057)    |                           |                          |         |
| Married                       | 292 | 5.20 (0.144)    |                           |                          |         |
| Menopausal status             |     |                 |                           |                          |         |
| Yes                           | 95  | 5.56 (0.241)    | 2.732 <sup>a</sup> (398)  | 0.79 (0.22,1.35)         | 0.007*  |
| No                            | 305 | 4.77 (0.142)    |                           |                          |         |
| Educational status            |     |                 |                           |                          |         |
| Secondary school              | 50  | 4.82 (0.301)    | -0.420 <sup>b</sup> (398) | -0.16 (-0.89,0.58)       | 0.675   |
| College/University            | 350 | 4.98 (0.135)    |                           |                          |         |
| Income                        |     |                 |                           |                          |         |
| Less than RM3000 <sup>c</sup> | 117 | 4.78 (0.207)    | 1.040 <sup>d</sup> (2)    |                          | 0.354   |
| RM3000–RM7000                 | 151 | 4.88 (0.207)    |                           |                          |         |
| More than RM7000              | 132 | 5.20 (0.226)    |                           |                          |         |
| Number of children            |     |                 |                           |                          |         |
| Nulliparous                   | 115 | 4.06 (0.224)    | 9.311 <sup>e</sup> (3)    |                          | <0.001* |
| Para 1                        | 29  | 4.38 (0.492)    |                           |                          |         |
| Para 2–4                      | 182 | 5.36 (0.175)    |                           |                          |         |
| Para 5 or more                | 74  | 5.58 (0.277)    |                           |                          |         |
| Occupation                    |     |                 |                           |                          |         |
| Professional                  | 114 | 5.46 (0.238)    | 5.453 <sup>f</sup> (3)    |                          | 0.001*  |
| Non-professional              | 159 | 4.37 (0.187)    |                           |                          |         |
| Housewife/unemployed          | 79  | 5.35 (0.267)    |                           |                          |         |
| Student                       | 48  | 5.04 (0.362)    |                           |                          |         |

<sup>a</sup>One-way ANOVA test; mean score "single" and "married" ( $p = 0.004$ ) was significantly different by post hoc test Bonferroni's procedure. <sup>b</sup>Independent t-test. <sup>c</sup>RM is Ringgit Malaysia, which is the Malaysian's currency. <sup>d</sup>One-way ANOVA test. <sup>e</sup>One-way ANOVA test; mean score "nulliparous" and "Para2-4" ( $p < 0.001$ ) and "nulliparous" and "Para 5 or more" ( $p = 0.001$ ) were significantly different by post hoc test Bonferroni's procedure. <sup>f</sup>One-way ANOVA test; mean score "professional" and "non-professional" ( $p = 0.002$ ) was significantly different by post hoc test Bonferroni's procedure.

pamphlet is the treatment options for POP. Conservative management by regular supervised pelvic floor exercise sessions with a pelvic physiotherapist, biofeedback programmes and vaginal pessaries should be made known to women, apart from surgery.

This studied population had a low incidence of self-perceived symptoms of POP. However, unfortunately, there was no further question asked on whether those with symptoms have sought any treatment or not. On the other hand, most respondents agreed that it is not normal to have symptoms of POP. However, only 273 (68%) respondents will seek treatment if they experience any symptoms of pelvic organ prolapse. It is important to note that this is an assumption question because respondents do not have symptoms. This may or may not be their actual action when they really have the symptoms. However, this assessment is crucial to understand the women better in order to identify the potential barrier towards the treatment of POP.

Unawareness of the existence of medical treatment for POP (43% of women) was the most prevalent reason for not seeking treatment in this study. This is also demonstrated in a study by Hammad et al.,<sup>19</sup> where the unawareness of medical treatment, lack of adequate knowledge about the condition and belief that the disease is part of normal ageing are essential determinants of the treatment-seeking behaviour for POP. It reflects a lack in health promotional activities in educating women on POP and its treatment option available. The next most common reasons for not seeking treatment were an embarrassment to see a doctor. The embarrassment to discuss POP symptoms with

healthcare providers was identified as one of the strongest determinants of treatment-seeking behaviour<sup>19</sup> and contributed to the delay in seeking medical services.<sup>4</sup>

The apprehension that women have to come forward and report if they have POP symptoms is understandable, given POP involves their private genital area. Discussing health problems affecting the private genital area is often a social taboo in certain communities including Malaysia. It can be overcome by creating more awareness, particularly among the family practitioner. The bonding that they have with the women can potentially provide a more trusted environment for them to seek further advice. Another significant determinant of treatment-seeking behaviour was when symptoms had interfered with their physical activities.<sup>19</sup> It is unfortunate as delaying treatment-seeking will only prolong their suffering with the symptoms caused by the POP. Worst, some women only present when decubitus ulcer had already formed with bleeding and infection.

A study by Jackson et al.,<sup>11</sup> found three common themes that mainly influence women's understanding of POP: culture, presence of barriers, and misconception. Another qualitative study among 14 women with POP awaiting surgical intervention demonstrated six factors that behave as barriers for women with POP from seeking health care. It includes the absence of information, blaming oneself, feeling ignored by the doctor, having a covert condition, adapting to successive impairment, trivialising the symptoms and de-prioritising own health.<sup>4</sup> It is crucial to use this information to plan any health education programme or educational materials on the POP to increase the effectiveness of the interventions.

This study also found that level of awareness is statistically significantly associated with marital status, educational status, occupation and number of children they have. Women who are married, menopausal, multiparous, and working as professionals had a higher mean score, indicating a higher level of awareness on POP than their comparative groups. No significant difference in the level of awareness in different levels of education and income groups was demonstrated. Similarly, Subedi et al.,<sup>14</sup> showed no significant association between the level of knowledge on POP and the level of education and type of education. However, they found a significant association between the level of awareness and the age of having the first child, which was not studied in this survey. On the contrary, a study by Singh et al.,<sup>16</sup> reported a significant association between the level of knowledge on risk factors of POP and the women's education level, and also, age at first childbirth.

It is an interesting observation that the mean score is increasingly higher with the increasing number of parity. It is vital to address this by incorporating information about POP during antenatal class and emphasise that pelvic floor exercise is an excellent preventative measure that women should start practice since their first pregnancy.

This study had few limitations. It was challenging to obtain an ideal representative sample of Malaysian women. Hence, this study involved women from various NGOs in Malaysia that may represent women from the general population in Malaysia to a certain extent. The method of electronic delivery of the questionnaire limits the possibility for the researchers to track how many women received the invitation for this study; hence, the response rate could not be reported. The participation was voluntary; therefore, the risk of selection bias is unavoidable. Another limitation is that, as the women were invited to answer the questionnaires via Google Form through emails, the possibility of the participants discussing or looking up the answers cannot be excluded. The questionnaire used in this study did not undergo a rigorous validation process. However, content validation and face validation were performed, followed by a pilot study among 20 women, that at least provide some basis that the questionnaire was a reliable tool for this study.

This study provides an insight into women's understanding of POP and their attitudes towards its treatment. A multi-prong approach is crucial where active participation from Primary Care and Public Health practitioners is essential in educating women on POP. Health promotion activities and materials should include important information on POP, including its risk factors, symptoms, prevention and treatment options. These interventions should be made accessible to women, both urban and rural. Ensuring the programme and materials are culturally appropriate is essential to facilitate engagement with women and increase acceptance.

It is known that discussing pelvic floor problems, including POP, may still be taboo for certain groups of women. Hence, raising awareness and normalising discussion on this topic may hopefully open the doors to women who wish to inquire more on POP or seek treatment. A dedicated walk-in clinic for women to attend for various women's health issues, including POP, can be a good platform to encourage women

to come forward for consultation or assessment. Approachable healthcare practitioners may reduce the anxiety or fear among women to seek help.

## CONCLUSION

In conclusion, most of the respondents have an inadequate level of awareness of pelvic organ prolapse. Though more than half of the respondents will seek treatment if they experience pelvic organ prolapse, the remaining who will not seek treatment should not be ignored. Among the common reasons for not seeking pelvic organ prolapse treatment include unawareness of the availability of medical treatment followed by embarrassment to see medical practitioners.

## CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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