ORIGINAL ARTICLE

Male Disadvantage in Undergraduate Ob/Gyn Learning and its Consequences: Experience of Malaysian Private and Public Medical Students.

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Abstract

Background: There are several concerns regarding the quality of male medical students' learning experience and their clinical skills development in Obstetrics and Gynaecology (Ob/Gyn) that may lead to clinical incompetency and lack of interest in the specialty. **Objectives:** This study aimed to evaluate male gender specific problems in undergraduate Ob/Gyn learning and their effects. It also determined the association between the limitations in clinical skill exposure and their clinical skill development and confidence level. **Methods:** Self-administered questionnaire-based survey was conducted involving 99 male medical students, who completed their Ob/Gyn rotation, from a public and a private medical university. **Results:** The largest proportion of participants experienced patient refusal "sometimes" for performing abdominal examination (35.4%), and observing pelvic examination and procedures (35.4%), observing or assisting normal delivery (37.4%) and even for their presence during consultation (51.5%) although they faced less refusal for history taking and observing LSCS. The highest proportion of the respondents exhibited "high confidence" in antenatal history taking (56.6%), gynaecological history taking (47.5%) and performing Leopold's manoeuvre (35.4%). However, proportion of respondents who expressed "low confidence" for performing obstetric vaginal examination and Pap smear were 38.4% and 32.3% respectively. Although 45.4% of respondents expressed less interest in pursuing Ob/Gyn career after their rotation, 43.5% would still consider Ob/Gyn as their future profession. The mean scores for limitations in learning, confidence level, and perceived effect on career choice were not significantly different between private and public university students. Our analysis also showed that the students with limitations in clinical learning are seven times more likely to have low confidence (OR 7.358, 95% CI 3.00-18.03). **Conclusion:** Significant degree of male disadvantage was observed in undergraduate Ob/Gyn learning that may have a substantial impact on their clinical competency and their interest selecting O&G speciality. Our results highlight the need for learning support systems by lecturers, female friends, and faculty to provide better learning experience for male students in Ob/Gyn posting.

Keywords: *confidence level, limitations, male, medical students, obstetrics and gynaecology*

Introduction

Obstetrics and Gynaecology (Ob/Gyn) is the medical branch that often involves intimate physical examinations on females. It was reported that male students experienced a significantly higher rate of rejection by the patients during medical consultation, clerking and internal examination than female students; therefore, they believed that the male gender negatively affected their learning in Ob/Gyn [1]. In Malaysia, increasing training needs for house officers in core Ob/Gyn raises concerns about the quality of undergraduate Ob/Gyn learning experience. Due to the nature of maternity care, male students have a disadvantage, especially in intimate examinations, that may be attributable to their incompetency and lack of interest in the specialty [2]. One of the reasons was the higher rate of refusal by patients. Therefore, the teaching of intimate examinations to medical undergraduates has drawn a lot of attention, mainly on ethical and medical-legal issues related to patient consent [3]. There may be a lot of factors that lead to a negative learning experience for male students in Ob/Gyn clinical attachment, and as a result, influence their interest in choosing an Ob/Gyn career. In the US, a declining trend in choosing an Ob/Gyn career was observed, and female gender, black race and graduate with more positive rating in an Ob clerkship were identified as the significant predictors for choosing an Ob/Gyn career, unchanged over three years of study (1997, 2000 and 2004) [4].

It was highlighted that, compared to female students, males experience higher levels of discrimination during their clinical training by medical officers, specialists, and consultants but not by staff nurses and house officers. As a result, a significantly lower number of male students have an interest in pursuing an Ob/Gyn career when compared to their female counterparts [1].

There was no significant gender difference in the number of Ob/Gyn specialty training applicants in Malaysia for the years 1995 and 1996 [5]. Similarly, the numbers of female and male Ob/Gyn trainees registered with the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) were comparable until the end of the 20th century; however, the number of female trainees has risen much more dramatically since 2000, and in 2018, 83% of doctors accepted for training were women [6]. According to national surveys of UK medical graduates over 40 years, a much higher percentage of women than men stated Ob/Gyn as their first choice and the largest influences of such choice are enthusiasm/commitment factors [7]. However, there is no such survey data, either among Malaysian medical students or medical graduates, available to date.

The objectives of our survey are to identify problems faced by male medical students during clinical attachment to Ob/Gyn posting and their perceived effect on clinical skills and exam performance. Moreover, we explored if there was any effect of their experience on their interest in pursuing Ob/Gyn speciality. In this study, we explored whether the male students' experiences are different between private and public universities.

Methods

Ethical approval

This was a cross-sectional survey conducted during October and November 2020 with the approval of the medical research ethical committee from UniKL RCMP Ipoh, Perak (Ref UNIKLRCMP/MREC/2020-2021/SRP-138).

Study sample

A total of 129 male medical students who completed their Ob/Gyn rotation, from University of Science Malaysia which is a public university, and Universiti Kuala Lumpur Royal College of Medicine Perak, a private university, were invited to participate. Ninety-nine students responded to the survey, therefore the response rate was 76.74%. Participants were instructed to read the research information first and then to give their consent before answering the questionnaire.

Study Tool

The self-administered questionnaire was distributed online using Google Form. It is a single response questionnaire and the content was generated according to the study objectives after reviewing the published literature. The questions covered 1. demographic background of participants, 2. limitations in clinical exposure and clinical skills development 3. students' confidence level in clinical performance and in clinical assessment in Ob/Gyn, 4. assistance received from female medical students, lecturers and hospital staff and 5. perceived effect of learning experience on their interest in choosing Ob/Gyn as their profession. An expert with Obstetrics and Gynaecology background validated the content of the questionnaire. A pilot study was conducted before the actual study. The questions with Cronbach's Alpha value less than 0.7 were reviewed and modified to improve reliability. The questions used in the survey for limitations in clinical skills, had Cronbach's Alpha value of 0.911, for confidence level was 0.837, for assistance received was 0.783, and for the perceived effect of their disadvantage in choosing Ob/Gyn as career was 0.845.

Scoring of the responses and categorization of the groups among participants

There were seven questions used to evaluate limitations in clinical learning, and the scores 1, 2, 3 and 4 were given for the responses 'never', 'rarely' 'sometimes' and 'always' respectively. For the assessment of confidence, the respondents used a five-point rating scale, and the score 1 is for the response 'no', 2 for "low', 3 for 'moderate' and 4 for 'high', and 5 for "full". There were seven statement questions with five rating points 1-5 in the question set that explored the perceived effects of their experience on choosing Ob/Gyn specialty as their profession. The response that implies perceived effects strongly was scored 5 and suggests no effect was 1.

The median values were used to categorize the data. The median value for limitation in learning is 16, therefore, ≤ 16 was considered no limitation and > 16 was considered presence of limitation. The median value for confidence was 19, therefore ≤19 was taken as low confidence, and >19 was as high confidence. For perceived effects the median value was 24, therefore ≤ 24 considered less effects and >24 was more effects.

Analysis

The data were analysed using the IBM SPSS Statistics for Windows, Version 27.

Test of significance was calculated using Chi-square test applying Fischer exact test as necessary. The mean total score of the respondents from the two universities were compared by using independent sample t-test. Data was also analysed to determine the association between the limitations and their effects on confidence level and their career choice as Ob/Gyn specialist.

Results

Fifty nine private university students and 40 public university students participated in the survey. The year 4 students outnumbered the year 5 students, and the vast majority were Malay. Nearly 95% had completed the Ob/Gyn clinical rotation only once.

As shown in table 2, the largest proportion of participants responded 'sometimes' when they were asked about patient refusal for their presence during consultation, for abdominal examination, to observe pelvic examination and procedures and to observe or assist normal delivery. More than half of respondents experienced refusal by patient's husband to observe vaginal delivery quite often. The largest proportion of the participants expressed that they never experienced patient's refusal for taking clinical history (45.5%) and observing lower segment caesarean section procedure (63.6%).

The largest proportion of the respondents exhibited "high confidence" in clinical history taking from antenatal patients (56.6%), gynaecological patients (47.5%) and performing Leopold's manoeuvre (35.4%). However, the

proportion of respondents who expressed "low confidence" for performing obstetric vaginal examination and Pap smear procedure were 38.4% and 32.3% respectively. The respondents exhibited good confidence in taking clinical examination with real patients in hospital as shown in Table 3.

More than half of the students reported that their female group mates always help them as their chaperones while taking history from patients. However, 28.3% agreed and 37.4% strongly agreed with the statement that their female friends are willing to help them only when they are free. (Table 4)

The vast majority of participants agreed that they have a favourable arrangement in their student's grouping for clinics, ward work, or labour room on-call, to get easy help from female group mates. While more than two thirds of students felt that lecturers were aware of their problems, similar numbers thought the issues faced by male students in Ob/Gyn postings were underestimated. Only a small proportion did not agree that they had assistance from the hospital staff and enough support to overcome the problems they faced.

Most of the respondents reported less interest in pursuing Ob/Gyn career after Ob/Gyn clinical rotation. In addition, 30.3% strongly agreed that females would be favoured in the selection of Ob/Gyn postgraduate training, however, 43.5% would still consider Ob/Gyn as their future profession. Most respondents strongly agreed that men can succeed in this career and were supportive of the statement that male doctors are needed in Ob/Gyn specialty. With regards to the question of gender bias in Ob/Gyn clinical training, the largest proportion of them stood neutral, but more than one third of respondents supported the statement. (Table 5)

When the students were categorized according to their scores, 48.48% of respondents have limitations in Ob/Gyn clinical learning and 53.53% of respondents have low level of confidence with regards to clinical history taking, clinical examination and procedure, and clinical assessments, and 45.45% exhibited more perceived effect on choosing Ob/Gyn speciality as profession. Overall, there was no statistically significant association between the students' limitations, confidence levels and effects on career and their various demographic variables ($p > 0.05$). (Table 6)

The mean scores for limitations in learning, confidence level and perceived effect on career choice were not significantly different between among students of two universities. (Table 7)

Our analysis also showed that the students with limitations in clinical learning are seven times more likely to have low confidence level (OR 7.358, 95% CI 3.00-18.03) while no significant association was found between limitation and perceived effect on career choice. (Table 8)

Discussion

In this study, we explored the limitations faced by male students during their undergraduate Ob/Gyn learning in different aspects at both private and public universities. Besides, we explored possible consequences of limited clinical exposure, and effects on confidence in career choice. We have also learned how male students received assistance to overcome their problems.

A Malaysian study showed that the training needs of a house officer in core Ob/Gyn competency have been significantly reduced over time, but there were specific areas of unpreparedness related to undergraduate medical training have also been identified [8]. There are concerns raised on the quality of training skills and application of knowledge during undergraduate programmes [9]. Our results support the findings from previous studies that male students are less experienced with intimate or pelvic examination skills [10,11]. It has been reported that female students had significantly more experience in performing speculum and vaginal examinations than the male counterparts [1]. This is probably due to the higher rate of refusal by the patients to cooperate with male students in the medical clerking and examination than with female students. A survey found that 68% of women would allow both male

and female students to engage in their outpatient obstetrics and gynaecology healthcare, although 16% would allow only females and 14% did not want to permit any students at all [12]. Therefore, it is consistent with our results that showed more than half of our respondents have limitations in observing intimate examinations and procedures, even for their presence / attendance during consultations. This explained the constraints faced by them during their Ob/Gyn posting either during Year 3 or Year 5. However, the possible reason for the less limitation among those who completed two rotations of Ob/Gyn than those who completed one might be due to development of better rapport-building skills as students advanced in their clinical year training.

It was reported that 78 % of men felt that their gender placed them at a disadvantage in obstetrics and gynaecology practical skills acquisition. This is similar to our findings, in which 50.5% of our students genuinely think that their female groupmates have never been refused to observe procedures performed in obstetrics and gynaecology [13]. Gender discrimination in medical education is not new, as male students have recognised that their gender has affected certain learning opportunities, as reported by Royal College of Obstetricians and Gynaecologists [14]. Yet our findings clearly indicated that male students still felt they can be a part of the team, and they believed that lecturers were aware of their problems and were trying to address the issue.

In this study, we found that the assistance received by the male students from hospital staffs (houseman officer, medical officer and nurses) during their interaction with obstetrics and gynaecological patients was encouraging. Majority of our respondents acknowledged the favourable arrangements in the posting to overcome gender discrimination. Actually, a good teamwork between male and female students promotes more positive learning experience and self-esteem [15]. In our study, the differences in the level of assistance from clinical staffs were not extensively explored. There was evidence that tensions in the professional relationship between male medical students and midwives were highlighted as a main determinant to inadequacies in clinical training [16]. Again, the role of the tutor in helping male students deal with obstetric and gynaecological patients has remained largely unexplored. Good assistance from hospital staff or a clinical tutor is important for male students because patients are more likely to engage if the request comes from them, and at the same time, both students and the patients feel more encouraged by their presence.

A significant preference that comes from culture, religion, and communities where detachment of genders and restrictions for cross-gender physical contact, although it is set aside in certain situations can further justify why these women find it embarrassing to expose certain areas of the body to the opposite gender [17]. This justifies the reason for married women needing their husband's permission first before giving consent, and our results truly validated it. One of the most distinguished factors affecting women's choices to choose a male or female doctor identified by a study was the preference of their husbands for a female doctor [18]. This may explain why male medical students have disadvantages in the labour room while husbands are attending labour process of their wives or partners.

The findings of an Australian study reveals that most students are confident in certain cases of intimate examinations, and it is mainly due to the guidance of professional teaching associates in vaginal and pelvic examination using pelvic models for practice and assessment [19]. In comparison, our respondents had low confidence in clinical skills of Pap smear and obstetric vaginal examination, although they have adequate training with pelvic models in the skill lab. This is not surprising, as the published research data indicates that the anxiety of male students provoked by intimate interaction is greater than that of their female groupmates [11]. The interesting finding is that only a few respondents expressed their interest in pursuing Ob/Gyn as their profession in spite of their belief

that men can succeed in this career and male doctors are needed in Ob/Gyn specialty. This might be due to their experience of gender bias during Ob/Gyn clinical rotation. As stated in a report, a positive preclinical exposure does bring an impact towards shaping male medical students' decision in pursuing Ob/Gyn as a career but often discouraged by the limitation to perform pelvic examinations [20].

Both male and female are needed in this field of work especially in different sub-speciality areas and there should be enough room for everyone. While around half of our respondents has expressed their genuine concern that female candidates would be favoured in selection of Ob/Gyn postgraduate training, in another study 25% of male students confessed that women's preference for women obstetricians and gynaecologists have made them feel discouraged in pursuing this field [21]. A similar conclusion reached by a study conducted among Indian medical graduates, which showed female graduates favour to choose Ob/Gyn as a speciality preference [22].

Our study could not determine a significant difference in our outcome variables among the respondents of private and public university. In fact, the public university has an advantage of having their own teaching hospital that provide more favourable learning environment in order to provide clinical experience and exposure. However, it is difficult to make such conclusion as our sample size is not large enough and also due to lack of previous research data that involving both private and public universities.

Besides, our findings clearly highlighted the importance of reducing limitations faced by male medical students during O&G rotations, which are significantly associated with their confidence levels in their clinical performance and clinical assessments, as those experience limitations are seven times more likely to have low confidence levels. We need to build a better clinical environment for our students to succeed. It has been demonstrated that there is an association between satisfaction with the learning environment and level of confidence in dealing patient care [23].

Limitation

Our study was not without limitations. Our participants came from two medical schools, yet there was a lack of racial diversity because most students were Malays. As the study was not carried out soon after the Ob/Gyn rotation, the students had to recall their experience to respond to our questionnaire, therefore, there may be some degree of inaccuracies. The response of the male students especially on career choice could also be influenced by their personality, attitude and preference.

Conclusion

In conclusion, the male medical students encountered limitations in Ob/Gyn clinical learning that led to low confidence levels in handling patients and performing clinical assessments, and as a result, they have low interest in choosing Ob/Gyn as their future career. In order to encourage them and make them feel welcomed in this clinical field and to improve recruitment into the specialty, there are steps to be taken: (1) Faculty must be aware and address about gender bias in clinical learning environment in routine practice (2) Educators need to encourage patients to help medical students' learning process without gender discrimination.(3) There must be a clear hospital policy of notifying patients and obtaining consent prior to student involvement in patient care (4) These issues are addressed through patient's education to have positive attitude towards the participation of male medical students. As the number of men currently choosing Ob/Gyn as a profession is declining, it is necessary to debate the reasons and role of men in this specialty.

Table 1. Demography of the study population (n=99)

Variable		No. (%)
University	Private	59 (59.6)
	Public	40 (40.4)
Academic Year	Year 4	56 (56.6)
	Year 5	43 (43.4)
Ethnicity	Malay	80 (80.8)
	Indian	7 (7.1)
	Chinese	6 (6.1)
	Others	6 (6.1)
Completed Ob/Gyn Clinical Posting	One posting	94 (94.9)
	Two postings	5 (5.1)

Table 2. Limitations in clinical exposure and clinical skills development (n=99)

Question statement	Number (%)			
	Never	**Rarely**	**Some-times**	**Always**
1. Have you been refused by the patient to be present in the room/clinic during clinical consultation?	18 (18.2)	20 (20.2)	51 (51.5)	10 (10.1)
2. Have you been refused by the patients to give their clinical history because you are a male?	45 (45.5)	27 (27.3)	24 (24.2)	3 (3.0)
3. Has a patient refused to give consent for abdominal examination because you are a male?	24 (24.2)	31 (31.3)	35 (35.4)	9 (9.1)
4. Have you ever been refused by the patient to observe pelvic examination and procedures?	11 (11.1)	22 (22.2)	35 (35.4)	31 (31.3)
5. Have you ever been refused by the patient to observe/assist normal vaginal delivery in labour room because you are a male?	18 (18.2)	30 (30.3)	37 (37.4)	14 (14.1)
6. Have you ever experienced that a patient's attending husband does not allow you to observe vaginal delivery in labour room?	28 (28.3)	21 (21.2)	34 (34.3)	16 (16.2)
7. Have you been refused to observe lower segment caesarean section (LSCS) delivery while female students are allowed?	63 (63.6)	16 (16.2)	16 (16.2)	4 (4.0)

Table 3. Confidence level during obstetrics and gynaecology posting among male students (n=99)

Question statement	Confidence level No. (%)				
	No	**Low**	**Mode-rate**	**High**	**Full**
1. How confident are you in taking clinical history from antenatal patients?	1 (1.0)	4 (4.0)	20 (20.2)	56 (56.6)	18 (18.2)
2. How confident are you in taking clinical history from gynaecological patients?	2 (2.0)	3 (3.0)	27 (27.3)	47 (47.5)	20 (20.2)
3. How confident are you to perform Leopold's manoeuvre on antenatal patients?	6 (6.1)	12 (12.1)	27 (27.3)	35 (35.4)	19 (19.2)
4. How confident are you to perform obstetric vaginal examination?	22 (22.2)	38 (38.4)	29 (29.3)	9 (9.1)	1 (1.0)
5. How confident are you to perform a pap smear?	23 (23.2)	32 (32.3)	30 (30.3)	12 (12.1)	2 (2.0)
6. What is your confidence level in taking Ob/Gyn clinical assessment with hospital patients compared to other postings?	3 (3.0)	9 (9.1)	42 (42.4)	35 (35.4)	10 (10.1)

Table 4. Assistance received during obstetrics and gynaecology posting among male students (n=99)

Question statement	No. (%)				
	Strongly disagree	**Dis-agree**	**Neut-ral**	**Agree**	**Strongly agree**
1. My female groupmates always help me as my chaperone in taking history from the hospital patients.	4 (4.0)	4 (4.0)	9 (9.1)	30 (30.3)	52 (52.5)
2. My female groupmates always help me getting consent from the patients to observe the procedures.	2 (2.0)	6 (6.1)	19 (19.2)	28 (28.3)	44 (44.4)
3. My female friends are willing to help only when they are free.	6 (6.1)	12 (12.1)	16 (16.2)	28 (28.3)	37 (37.4)
4. I think we have favorable arrangement in students' grouping for clinics, ward work or labour room on-call, to get easy help from my female groupmates.	3 (3.0)	1 (1.0)	10 (10.1)	36 (36.4)	49 (49.5)
5. I feel that lecturers are aware of our problems and try to address this issue.	1 (1.0)	13 (13.1)	15 (15.2)	30 (30.3)	40 (40.4)
6. I think the issues faced by male students in Ob/Gyn posting is underestimated.	2 (2.0)	7 (7.1)	23 (23.2)	32 (32.3)	35 (35.4)
7. The hospital staff are giving assistance to male students to have clinical exposure with Ob/Gyn patients (houseman officer, medical officer and nurses).	4 (4.0)	10 (10.1)	22 (22.2)	24 (24.2)	39 (39.4)
8. I feel like I have enough support to overcome the problems dealing with female patients.	3 (3.0)	9 (9.1)	31 (31.3)	28 (28.3)	28 (28.3)

Table 5. Perceived effects of male disadvantage in learning on choosing Ob/Gyn specialty as profession (n=99)

Question Statement	No. (%)				
	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1. I have less interest in pursuing Ob/Gyn speciality as my profession after O&G clinical rotation.	17 (17.2)	16 (16.2)	21 (21.2)	22 (22.2)	23 (23.2)
2. Female candidates would be favored in selection of Ob/Gyn postgraduate training.	8 (8.1)	12 (12.1)	27 (27.3)	22 (22.2)	30 (30.3)
3. I can be a part of the Ob/Gyn team.	5 (5.1)	15 (15.2)	26 (26.3)	30 (30.3)	23 (23.2)
4. I would still consider Ob/Gyn as my future profession.	14 (14.1)	19 (19.2)	23 (23.2)	26 (26.3)	17 (17.2)
5. Men can succeed in this career.	1 (1.0)	2 (2.0)	9 (9.1)	19 (19.2)	68 (68.7)
6. Male doctors are needed in Ob/Gyn specialty.	4 (4.0)	3 (3.0)	21 (21.0)	24 (24.2)	47 (47.5)
7. There is gender bias in Ob/Gyn clinical training.	14 (14.1)	8 (8.1)	38 (38.4)	20 (20.2)	19 (19.2)

Table 6. Association between demographic variables, limitations, confidence levels and effects on career of choice among male students (n=99)

Variables	Limitations			Confidence levels			Effects on career		
	No. (%)		p- value	No. (%)		p-value	No. (%)		p-value
	Absent	Pre-sent		Low	High		Less	More	
University									
Private	28 (47.5)	31 (52.5)	.327	32 (54.2)	27 (45.8)	.865	34 (57.6)	25 (42.4)	.455
Public	23 (57.5)	17 (42.5)		21 (52.5)	19 (47.5)		20 (50.0)	20 (50.0)	
Academic Year			.731			.102			.064
Year 4	28 (50)	28 (50)		34 (60.7)	22 (39.3)		26 (46.4)	30 (53.6)	
Year 5	23 (53.5)	20 (46.5)		19 (44.2)	24 (55.8)		28 (65.1)	15 (34.9)	
Ethnicity									
Malay	40 (50)	40 (50)		44 (55.0)	36 (45.0)	0.545 *	41 (51.3)	39 (48.8)	
Chinese	4 (66.7)	2 (33.3)	.942*	3 (50.0)	3 (50.0)		4 (66.7)	2 (33.3)	.459*
Indian	4 (57.1)	3 (42.9)		2 (28.5)	5 (71.4)		4 (57.1)	3 (42.9)	
Others	3 (50)	3 (50)		4 (66.7)	2 (33.3)		5 (83.3)	1 (16.7)	
Completed posting			0.672*			0.180 *			.657*
One posting	49 (52.1)	45 (47.9)		52 (55.3)	42 (44.7)		52 (55.3)	42 (44.7)	
Two postings	2 (40.0)	3 (60.0)		1 (20.0)	4 (80.0)		2 (40.0)	3 (60.0)	

* Fischer exact test

Table 7. Comparison of mean score for limitation, confidence level and perceived effect on career choice between universities

Universities	Mean (sd)	95 % CI	t	p value
Limitations				
UniKL RCMP	16.68 (4.89)	-0.288 – 3.594	1.69	0.094
USM	15.03 (4.59)			
Confidence Level				
UniKL RCMP	19.25 (3.74)	-1.508- 1.617	0.069	0.945
USM	19.20 (3.98)			
Perceived Effect on Career Choice				
UniKL RCMP	22.59 (5.35)	-3.838-0.325	-1.675	0.097
USM	24.35 (4.75)			

**t-test was performed, level of significance at p<0.05*

Table 8. Association between limitations and confidence level and perceived effect

	Limitations		**Chi-square value**	**df**	**POR**	**P-value**	**95% CI**
	Have	**No**					
Confidence level							
Low	37 (69.8%)	16 (30.2%)	20.771	1	7.358	<0.001	3.003-18.026
High	11 (23.9%)	35 (76.1%)					
Perceived Effect							
More	19 (42.2%)	26 (57.8%)	1.295	1	1.587	0.255	0.715-3.254
Less	29 (53.7%)	25 (46.3%)					

Chi-square test was performed, level of significant at p <0.05
POR = Prevalence Odds Ratio, df = degree of freedom

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