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Knowledge and practice regarding Pelvic Floor Disorders among mid-level health providers in eastern Nepal: A cross-sectional study

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Abstract

Aims: Pelvic floor disorders negatively affect the quality of life of women worldwide. Lack of adequate knowledge among women as well as health workers and limited access to health care has deprived women of proper management. This study aimed to assess the knowledge and common practice regarding PFDs among mid-level health providers.

Methods: A descriptive cross-sectional survey was conducted among mid-level health providers attending training on reproductive health morbidity screening at the health training centers of two hilly districts of eastern Nepal after ethical clearance from Institutional Review Committee, BPKIHS. The data were collected using a structured questionnaire, pretested before the use. The participants were requested to complete questionnaire before the training session was started. The data obtained were analyzed using descriptive statistics.

Results: Out of 72 participants, 71 completed the questionnaires. Mean age of participants was 30.56±8.27 years. Among them, 63.4% were nurses and 36.6% ANMs; 81.7% were aware of pelvic floor disorders (PFD), 90.2% identified pelvic organ prolapse (POP) as the commonest PFDs in Nepal, 91.4% were aware of risk factors and 32.4% knew about Urogynecology subspeciality. Majority (53.4%) were not screening for PFDs routinely. Nearly 40% participants would reassure and refer the patients with POP, 53% do so for urinary incontinence and 70% would refer patients with obstetric fistula and fecal incontinence. Only 35% would start treatment for pelvic organ prolapse. Those with experience > 5 years were more likely to screen PFDs (p=0.007) and start treatment for pelvic organ prolapse (p=0.034).

Conclusion: Mid-level health providers are aware of common pelvic floor disorders but are not routinely screening these disorders or practicing simple conservative management strategies. Training these health workers with proper screening guidelines on pelvic floor disorders is imperative.

Introduction

Pelvic floor disorders (PFDs) negatively affect the quality of lives of women around the globe.¹ One quarter of female population in the United States suffer from at least one PFD and the rate doubles after the age of 80.² Large prevalence studies on PFDs are lacking in Nepal. However, studies have reported prevalence of urinary incontinence ranging from 3.3 -24% and pelvic organ prolapse 8-43%.³⁻⁵ Nepalese women may experience the symptoms for 8-23 years before seeking medical help.⁶ This is mostly because of the lack of awareness on PFDs among the patients as well as health care providers.

Mid-level health providers are important pillars of healthcare system serving as a link between community and health services. They are the major workforce in rural areas with a substantial role in achieving universal health coverage through preventive and curative services.⁷ If they become aware of morbidities associated with PFDs, they

can contribute in prevention, screening and management of these conditions.

Reproductive health morbidity screening, including PFDs, is a priority health program of Government of Nepal. This study was a part of pilot training of mid-level health providers which further was a part of policy making for management of PFDs and aimed to assess the knowledge and management practice regarding PFDs among mid-level health providers.

METHODS

This was a descriptive cross-sectional survey conducted at the health training centers of Dhankuta and Sankhuwasabha districts of Eastern Nepal. Ethical clearance was obtained from the Institutional Review Committee (IRC) BPKIHS (Ref no. 03/080/081-IRC). The study population comprised of mid-level health providers practicing in community level health facilities of different districts of Koshi province. Mid-level health workers are the health workers who have received shorter training than physicians but perform some of the same tasks as physicians. They provide clinical care or engage in preventive care and health promotion.⁷ In this study, mid-level health workers include Auxiliary Nurse Midwives (ANM) and Staff Nurses working in different level health facilities. Province Health Training Center of Koshi province conducted training on reproductive health

morbidity screening for mid-level health providers from 15th May to 16th July 2023. The screening package included cervical cancer, pelvic organ prolapse, obstetric fistula and breast cancer screening.

Data collection was done using a structured questionnaire prepared by the investigator after expert consultation. The questionnaire was pretested in 12 interns (equal to the number of participants in one batch of training) posted in department of obstetrics and gynecology who are fluent in both Nepali and English language.

The mid-level health providers attending the training sessions on reproductive health morbidity screening were invited to participate in the survey. They were given the pretested questionnaire prepared in both the languages (English as well as Nepali) and were asked to complete them before the session started. The participants did not require to reveal their identity. The participants were allowed to seek clarification in questions if they needed. The completed questionnaires were collected; data was entered in Excel sheet and analyzed using SPSS version 16.0. Descriptive statistics was used and the results were presented as frequency and percentages for categorical variables and mean with standard deviation (SD) for continuous variables. Chi square test was applied to derive association between the related variables.

Please answer all the questions

1. Age:

2. Gender:

3. Qualification and job description:

a) Certificate level / Bachelor level / Masters' level

b) Nurse / Doctor / Others

4. How many years you are in practice?

a. < 5 years b. 5-10 years c. 10-15 years d. > 15 years

5. Do you know about Pelvic Floor Disorders? Yes / No

6. What do you think is the risk factor for PFD (one or multiple answer)

a. Pregnancy /delivery b. Age c. Smoking d. Heavy weight lifting e. all of them

7. How often you see such patient in your practice?

a. Less than 10 a week b. 10-20/week c. 20-50 /week d. >50/week

तलका सबै प्रश्नको उत्तर दिनुहोला

१) उमेर:

२) लिंग:

३) शैलिक योग्यता / पेशा:

क) प्रविणता प्रमाणपत्र तह/ स्नातक तह/ स्नातकोत्तर तह

ख) नर्स /डाक्टर /अन्य

४) यस क्षेत्रमा कति बर्ष देखि कार्यरत हुनुहुन्छ ?

क) ५ बर्ष भन्दा कम ख) ५ – १० बर्ष ग) १० – १५ बर्ष घ) १५ बर्ष भन्दा बढी

५) के तपाईंलाई Pelvic Floor Disorders को बारेमा थाहा छ? छ / छैन

६) तपाईंको विचारमा Pelvic Floor Disorders को जोखिम तत्वहरु के के होलान्? (१भन्दा बढी सही उत्तर)

क) गर्भावस्था / प्रसूति ख) उमेर ग) धूम्रपान घ) भारी / गहुङ्गो सामान उचाल्नु ङ) माथिका सबै

७) आफ्नो दैनिक कामको सिलसिलामा तपाईं त्यस्ता बिरामी कतिको भेटनुहुन्छ?

8. Which condition is more common in Nepal?

a. POP b. Urinary Incontinence c. Fecal Incontinence d. Obstetric Fistula

9. Do you routinely screen patients for pelvic floor disorders in your practice? Yes/ No

10. How do you manage these conditions?

	Provide Reassurance	Treat myself	Refer to other center
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Urinary Incontinence			
Pelvic organ prolapse			
Obstetric Fistula			
Fecal Incontinence			

11. Do you think lifestyle modification has role in management of PFDs? Yes /No

12. Do you know Urogynecology Specialty? Yes /No

क) < १० / हप्ता ख) १०-२०/ हप्ता ग) २०- ५० / हप्ता घ) > ५०/ हप्ता

८) नेपालम यी मध्ये कुन अवस्था बढी विद्यमान छ?

क) आङ (पाठेघर) खसे ख)पिसाब चुहिने ग) चहने घ)दिसा चुहिन् घ) प्रसव फिस्टुला

९) के तपाई आफ्नो नियमित कामको सिलसिलामा बिरामीहरुमा Pelvic Floor Disorders को पहिचान (Screening) गर्नु हुन्छ? गर्छु /गर्दिन

१०) यी समस्याहरुको व्यवस्थापन कसरी गर्नुहुन्छ?

	आवश्यक परामर्श दिन्छु ।	आफै उपचार गर्छु ।	अन्य स्वास्थ्य संस्थामा प्रेषित गर्छु।
पिसाब चुहिने			

आङ खसे			
प्रसव फिस्टुला			
दिसा चुहिने			

११) के तपाईको लिचारमा PFDs को व्यवस्थापनमा जीवनशैली परिवर्तनको केही भूमिका छ? छ / छैन

१२) के तपाईलाई Urogynecology Specialty को बारेमा थाहा छ? छ / छैन

Fig 1. Survey questionnaire in English (left) and Nepali (right) language.

Results

There were total of six batches of health workers, each batch comprising of 12 members, who received training on reproductive health morbidity screening. Out of 72 participants, one participant did not complete the questionnaire. Therefore, 71 responses were taken for analysis.

Mean age of the participants was 30.56±8.27 years. Most of the health workers (63.4%) identified themselves as nurses while rest were ANMs and majority had work experience of less than 10 years (78.9%). The baseline characteristics of the participants are presented in Table 1.

Table 1: Baseline characteristics of the participants

Characteristics	Frequency (%)	Mean (SD)
Age		30.56 (8.27)
Education		
Certificate level	65 (91.6)	
Bachelor level	5 (7.0)	
Masters level	1 (1.4)	
Occupation		
ANM	26 (36.6)	
Nurse	45 (63.4)	
Job Experience		
Less than 5 years	32 (45.1)	
5-10 years	24 (33.8)	
10-15 years	6 (8.5)	
More than 15 years	9 (12.7)	

More than 80% of participants were aware of pelvic floor disorders and 90% believed that POP is the commonest PFD in Nepal. Among them who were aware of PFDs, more than 90% were aware of various risk factors. Twenty three (32.4%) participants were aware of the subspeciality urogynecology. Table 2. presents the data on baseline knowledge of PFDs among participants

Table 2. Baseline knowledge regarding pelvic floor disorders

Questions	Response	Frequency (%)
Do you know about pelvic floor disorders? (n=71)	Yes	58 (81.7)
	No	13 (18.3)
Which condition is more common in Nepal? (n=71)	Pelvic Organ Prolapse	64 (90.2)
	Urinary Incontinence	5 (7.0)
	Fecal Incontinence	1 (1.4)
	Obstetric Fistula	1 (1.4)

What do you think is the risk factor for PFD? (n=58)	Pregnancy / delivery	57 (98.3)
	Age	53 (91.4)
	Smoking	53 (91.4)
	Heavy weight lifting	54 (93.1)
Do you think lifestyle modification has role in management of PFDs? (n=58)	Yes	52 (89.7)
	No	6 (10.3)
Do you know about Urogynecology specialty? (n=71)	Yes	23 (32.4)
	No	48 (67.6)

More than half (53.4%) of the respondents were not screening for pelvic floor disorders in their regular practice and majority (89.7%) mentioned that they encounter less than 10 such patients per week in their practice. The common practices of the health workers regarding pelvic floor disorders are presented in Table 3. and Figure 2.

Table 3: Common practice of mid-level health workers regarding pelvic floor disorders

Questions	Response	Frequency (%)
Do you routinely screen patients for pelvic floor disorders in your practice? (n=58)	Yes	27 (46.6)
	No	31 (53.4)
How often you see such patient in your practice? (n=58)	Less than 10 per week	52 (89.7)
	10-20 per week	4 (6.9)
	21-50 per week	2 (3.4)

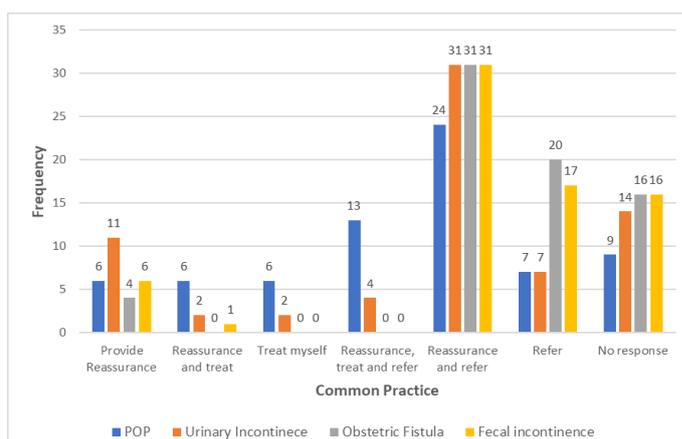


Fig 1: Response to the question "How do you manage these conditions?"

Regarding the management of these disorders, nearly 40% of the participants reported that they would reassure and refer the patients with pelvic organ prolapse, 53% would do so for urinary incontinence while 70% would refer the patients with obstetric fistula and fecal incontinence. Thirty five percent

health workers mentioned that they would start treatment for pelvic organ prolapse. There was no response on management of obstetric fistula and fecal incontinence from 22% participants.

On analyzing the association between the years of experience and knowledge and common practice regarding PFDs, it was found that health workers working for more than five years were more likely to screen PFDs routinely in their practice than those with experience less than five years (p=0.007). Since, 40%

of the participants responded that they would start treatment for pelvic organ prolapse, we analyzed if work experience has association with starting the treatment at their level. It was found that 26.7% of health workers having less than five years of work experience would start treatment in addition to reassurance and referral as compared to 53.1% of those with more than five years of experience (p=0.034). However, duration of experience did not have any association with the knowledge of PFDs or urogynecology subspeciality.

Table 4. Association between the years of experience and knowledge, practice regarding PFDs.

Years of experience	Do you know about pelvic floor disorders? (n=71)		P value
	Yes	No	
Less than 5 years	26 (81.3%)	6 (18.8%)	0.931
5 years or more	32 (82.1%)	7 (17.9%)	
	Do you screen PFDs routinely? (n=58)		
	Yes	No	
Less than 5 years	7 (26.9%)	19 (73.1%)	0.007
5 years or more	20 (62.5%)	12 (37.5%)	
	Do you know about Urogynecology subspeciality? (n=71)		
	Yes	No	
Less than 5 years	9 (28.1%)	23 (71.9%)	0.486
5 years or more	14 (35.9%)	25 (64.1%)	
	How do you manage Pelvic Organ Prolapse? (n=62)		
	Start treatment	Do not start treatment	
Less than 5 years (n=30)	8 (26.7%)	22 (73.3%)	0.034
5 years or more (n=32)	17 (53.1%)	15 (46.9%)	

Discussion

Mid-level health care workers are a strong pillar of health care delivery system in Nepal. These health workers, mainly Auxiliary Nurse Midwives (ANMs) are responsible for providing maternal health care to the community. Besides, they can have a great impact on preventive health including screening and referral for the conditions prevalent in community and help women who are hesitant to seek medical care. Currently, government of Nepal has envisioned screening of reproductive health morbidities from the community health workers and planning to provide training to the mid-level health providers. Pelvic floor disorders like pelvic organ prolapse and obstetric fistula has been included in the reproductive health morbidity screening package. This study aimed at obtaining the baseline information on existing knowledge and common practice regarding pelvic floor disorders among mid-level health workers. There are no such studies assessing the knowledge, attitude and practice regarding PFDs among health workers in Nepal.

It was an encouraging finding that 81.7% of the health workers were aware of the pelvic floor disorders and 90% rightly identified that pelvic organ prolapse is the commonest PFD in Nepal. There is paucity of data on prevalence of pelvic floor disorders in Nepal and the available literature reported the prevalence of POP higher than other PFDs.⁵ However, another prevalence study from western Nepal has reported 24.1% prevalence of stress urinary incontinence (SUI), 13.5% for urgency urinary incontinence (UUI) and 8% for POP.³ Therefore, more prevalence studies are needed to obtain clear understanding of the prevalence of pelvic floor disorders in Nepal.

More than 90% of participants responded that pregnancy and childbirth, age, smoking, heavy weight lifting are risk factors for pelvic floor disorders and believe that lifestyle modification has role in management of PFDs. Since the answer included the option “all of the above,” and most participants chose that option, we distributed that response to each of the options. On doing so, 98% of them identified pregnancy and childbirth as

risk factors. However, it is questionable whether the attribution to risk factors would have been same if option “all of the above” had not been there.

There are no definite screening tools for pelvic floor disorders. Screening can be done for individual disorders with different screening questionnaire as well as with pelvic examination.⁸⁻¹¹ Due to lack of uniform guidelines and screening tools most health workers do not screen for these disorders in routine practice. In our survey, 46.6% health workers reported that they routinely screen for these conditions. This is not surprising as compared to a study among obstetricians and gynecologists, where 30% reported that they never screen for PFDs.¹² Similarly, a study among primary care physicians reported that 36% of them would screen for UI sometimes but 43% hardly ever screen for POP.¹³ In the current study, it was observed that those health workers with more than five years of work experience were more likely to screen for PFDs in their routine practice.

Most of the health workers used to refer the patients with pelvic floor disorders. However, many mentioned that they would reassure the patients as well as some would provide the available treatment before referring them. Even though 35% of health workers mentioned that they would provide some treatment for pelvic organ prolapse, only 11% were providing treatment for urinary incontinence. However, all of them were referring the patients with obstetric fistula and fecal incontinence. It was observed that women working for more than five years in this field were likely to start treatment for pelvic organ prolapse than those with less duration of experience. This might be due to the fact that with longer years of working in the community they might acquire the skills, develop confidence on treating such patients. Also, women with PFDs might feel more comfortable on being treated with the health workers with more experience.

Some of the health workers also mentioned different treatment options they use for these disorders. Among the health workers providing treatment for POP, ten health workers mentioned about ring pessary and three mentioned about Kegel's exercise. Two of the health workers mentioned about fluid intake in management of urinary incontinence and fecal incontinence. Though, this was not a part of the questionnaire, these findings suggest the fact that these health workers are aware of PFDs like pelvic organ prolapse but are not familiar with the simple treatment measures like lifestyle modifications, pelvic floor exercise. Training these health works about these conservative management is a worthwhile strategy to reach rural women in need.¹⁴

CONCLUSION

Most of the mid-level health workers are aware of common pelvic floor disorders but are not routinely screening these disorders in their practice and not practicing the simple conservative management strategies as well. This finding

highlights the need of proper training to the health workers on screening and management on common pelvic floor disorders developing standard guidelines so that actual prevalence of these condition in community can be identified and high-quality management reaches the women of rural setting.

Conflict of Interest

No

Acknowledgements

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