



Sri Lankan Public Health Midwives' Knowledge on Maternal Mental Health Disorders

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ABSTRACT

Emotional support and services provided by Public Health Midwives (PHMs) play a crucial role in identification and management of maternal mental health disorders as they are the first line contact in maternal and child-care and the focal field health members in caring for the antepartum and postpartum mothers. Aim of this study was to describe the Sri Lankan PHMs' knowledge on maternal mental health disorders. Cross-sectional descriptive study was conducted using probability proportionate sampling, covering PHMs of all districts in Sri Lanka. Total of 434 PHMs were recruited with 99.1% response rate. A content-validated pre-tested questionnaire was administered. Univariate and multivariate analysis was used to assess the knowledge of each component with selected study variables. Respondents' mean age was 40.6 years. Out of the 430 PHMs, 36% of them were unaware, that symptoms of Depression and anxiety could be commonly seen during antenatal and postpartum period. It was found that only 21.8% of the respondents knew the average number of maternal deaths due to suicides in Sri Lanka. Forty-seven percentage of the respondents did not know, that providing understanding, empathy and support was the most appropriate step in managing mothers with Postpartum Blues. This study findings highlight major deficiencies in basic knowledge of PHMs in identifying and initial management of common maternal mental health disorders. Therefore, focus on continuous professional development of PHMs should be prioritized.

Keywords: Knowledge, Maternal, Mental health disorders, Public Health Midwives, Sri Lanka

INTRODUCTION

The mental wellbeing of a mother in the antenatal and postpartum period, from pregnancy to the first year after the childbirth is of international importance (Excellence NIFHaC, 2014). Physical, psychological, and social vulnerability during antenatal and immediate postnatal period can negatively influence the mental health status of any mother.

Symptoms and signs of maternal mental health disorders vary depending on the specific disorder. In severe cases, it can be life threatening, even can end up in suicide (Maryam, Kheirabadi & Bahrami, 2018). Women with mental health disorders are at noticeably greater risk than non-mentally ill mothers in experiencing an obstetric complication during labour and delivery and suffering from premature labour (Thornton, Guendelman & Hosang, 2010). It was also found that children of mothers who have untreated Depression can develop cognitive, behavioural and emotional problems, such as, delays in language development, sleep disturbances, feeding difficulties, excessive crying, and attention-deficit/hyperactivity disorder (Mughal, Siddiqui & Yusra, n.d.).

The commonest maternal mental health disorder, Postpartum Blue is a mild disorder defined by symptoms including mood lability, irritability, tearfulness, generalized anxiety, sleep and appetite disturbance which usually begin on day 3 or 4 postpartum, persist for several days, and do not require treatment other than reassurance (Robertson, Celasun & Stewart, 2003).

Public Health Midwives (PHMs) are the focal grassroot public health workers in maternal and child health in Sri Lanka. They are the first contact of antenatal and postpartum mothers in the field (Family Health Bureau, 2018). Emotional and supportive services provided by PHMs can improve health and well-being of pregnant mothers, by reducing stress, trauma and depressive symptoms (Jones, Creed & Gamble, 2011). In Sri Lanka, deficiencies were observed in knowledge and competencies of PHMs (Gunathunga & Fernando, 2000).

Aim of this study was to synthesis comprehensive information on knowledge of PHMs on maternal mental health disorders in Sri Lanka.

DATA BASE AND METHODOLOGY

Cross-sectional descriptive study was conducted among all PHMs in Sri Lanka who were currently on active service, attached to field health in Medical Officer of Health (MOH) offices. Sample size was estimated for margin of error of 0.05, confidence interval of 95% and estimated proportion of correct knowledge of 0.5 to yield the largest sample size as no recent studies were available, conducted among PHMs on this topic in Sri Lanka. Probability proportionate sampling was used to decide the number of PHMs from each of the 25 districts in the country. List of all PHMs who are serving on each district was obtained from each Regional Director of Health Services in the country for this purpose. Total of 434 PHMs were recruited accommodating a non-response rate of 10% (Highest from Gampaha District- 38, lowest from Kilinochchi-4 and Mullaitivu-4). Total of 430 PHMs responded satisfactorily (99.1%). A content validated pre-tested questionnaire was developed which included 29 items on knowledge and practices and 4 items on competencies.

Ethical clearance was obtained from Ethics Review Committee of Faculty of Medicine, University of Colombo. The selected PHMs were contacted and briefed on the objectives of the study and informed written consent was obtained.

Data summarization was carried out using tables. Univariate and multivariate analysis was used to assess the knowledge of each component with selected study variables.

RESULTS AND DISCUSSION

A total of 430 PHMs have satisfactorily responded to the questionnaire (99.1%). The mean age of the respondents was 40.6 years (SD=9.37) and the mean years of experience as a midwife was 14.7 years (SD=8.93). A PHM provided services to 51 pregnant mothers on average during 2019 (SD=23.59).

The assessment on training of PHMs pertaining to the maternal mental health disorders, found that 61.2% of the respondents have received a training on maternal mental health and 68.1% have received a training on counselling. Out of the 430 PHMs, 36% did not know, that symptoms of Depression and anxiety could be commonly seen during antenatal and postpartum period. Even though, 40.7% of the respondents knew that there is a separate hotline number that could be contacted to obtain advice regarding mental health issues, only 13.3% knew the correct hotline

number. Similarly, only 38.4% of the respondents were aware that there is a separate hotline number available to get assistance regarding issues pertaining to women. However, most of the respondents (94.7%) did not know the correct hotline number to be contacted (Table not provided).

Many of the participants (73.5%) was knowledgeable that, hypertension, spontaneous abortion and domestic violence are associated with Depression during pregnancy. A total of 358 out of 430 participants (83.3%) did not consider the lack of recognition of symptoms of Depression by healthcare providers as a common reason for the depressed pregnant mother not receiving adequate help. The usual treatment for Depression during antenatal period being the antidepressants and counselling was not known by 35.1% of the respondents (Table not provided).

The fact that, postpartum Blues is the commonest Maternal mental health disorder was not known by the majority (74.7%) of the respondents. Most of the respondents did not have a clear picture regarding the symptoms of Postpartum Blues, where 60% of the respondents have incorrectly considered that self-harm ideas as a symptom and 57.7% of the respondents have incorrectly considered, thoughts of harming the baby also as a symptom of Postpartum Blues. Furthermore, 61.2% of the respondents incorrectly believed that continuation of depressive symptoms for more than 14 days is also considered as Postpartum Blues. Forty-seven percent of the respondents did not know that, providing understanding, empathy and support was the most appropriate step in managing mothers with Postpartum Blues. Out of the 430 respondents, 49.5% did not know that there is a likelihood for the women with Postpartum Depression to develop Postpartum Depression in the subsequent pregnancies. Furthermore, 31.6% of the respondents incorrectly believed that 80% of mothers with Postpartum Depression would spontaneously recover without treatment. Thirty-six percentage of the respondents were not aware that, educating the mother about postpartum Depression, providing supportive counselling and peer support groups would be the management for mild Postpartum Depression. The results also revealed that there were gaps in the understanding of PHMs about Postpartum Psychosis. Out of the 430 respondents, 256 of them (59.5%) did not know that mothers with Postpartum Psychosis should be hospitalized and treated with medication (Table not provided).

In the assessment of knowledge regarding the Edinburgh Postnatal Depression Scale (EPDS), it was identified that, 96.7% of the respondents were aware that all postnatal mothers should be assessed with this scale. However, most of the respondents (75.7%) did not exactly know, what can be achieved or detected by using this scale. Moreover, 34% of the respondents were not aware of the cut-off score of the Edinburgh Postnatal Depression Scale, above which a mother should be referred for further management (Table not provided).

Younger age of PHMs (less than 50 years) improved the knowledge of management of Postpartum Blues and initial management of Postpartum Psychosis compared to older PHMs of 50 years or more (Table 1 and 3). Whereas, only PHMs of less than 34 years showed significant improved knowledge on appropriate management of Mild Postpartum Depression compared to older PHMs of 50 years or more (Table 2).

In addition, PHMs who are stationed in rural areas were less knowledgeable on appropriate management of Postpartum Blues compared to PHMs working in urban areas (Table 1). However, such difference was not observed in initial management of other maternal mental health conditions. Advanced level stream of study too was a factor in correct knowledge of initial management of postpartum Psychosis as PHMs who have studied in Commerce and Art streams were less knowledgeable (Table 3). However, such difference was not observed in initial management of other Maternal Mental Health disorders (Table 1 and 2).

Table 1 (Page 50)

Table 2 (Page 51)

Table 3 (Page 52)

This study was conducted to investigate the knowledge of PHMs in Sri Lanka. Though many have investigated the knowledge of Midwives in maternal mental health illnesses, this is the first such study in Sri Lanka. In general, more than fifty percent of PHMs incorrectly mentioned the approximate average number of maternal suicides due to mental health illnesses (78.3%), unaware of the availability of designated mental health hotline (59.3%) and did not the correct hotline number for issues related to women (94.7%). A study conducted by Jones et al revealed that among Australian Midwives, 98.3% wrongly answered for the percentage of depressed antenatal mothers who attempt suicide. Perhaps, our question was a simplified version which was

more general. Nevertheless, only 15.3% knew the correct answer for the number of maternal suicides due to mental health illnesses. Despite major media coverage and awareness campaigns on Mental Health Hotline which was launched in 2018, majority of PHMs were unaware of such hotline (Rajakaruna, 2018). This might negatively affect the management of maternal mental health issues.

Less than two thirds of the PHMs were aware of the risk factors of the Depression in antenatal period (66.3%) and about the usual treatment of Depression in antenatal period (64.9%). Only 16.3% were aware that lack of recognition of symptoms of Depression by healthcare providers is the most common reason for not receiving adequate help. In comparison with the Midwives study in Australia, only 30.4% identified risk factors of antenatal Depression correctly, however, 68% correctly identified the treatment option for antenatal Depression (Jones, Creedy & Gamble, 2012).

Knowledge on Postpartum Blues and Depression among PHMs in general, seems to be poorer than the knowledge on antenatal Depression. For example, only 40% and 36.4% were aware that self-harm ideas and thoughts of harming the baby respectively are not symptoms of Postpartum Blues. Furthermore, only 53% and 64% correctly knew the appropriate step in managing postpartum Blues and mild Postpartum Depression respectively. This is contradictory to the general belief that Midwives are more aware of Postpartum Depression compared to Antenatal Depression (Jones, Creedy & Gamble, 2012; Buist et al., 2007). On prevalence of Postpartum Depression among mothers, 54.9% of the PHMs incorrectly identified it, with 41% underestimating the prevalence of Postpartum Depression. This is similar to studies conducted in many countries on knowledge of Midwives on prevalence of Postpartum Depression. Keng described the correct knowledge among Malaysian Midwives at 39% with 61% assuming the prevalence to be less than 10% (Keng, 2005). An Australian study reported that only 55.6% correctly identified this proportion (Jones, Creedy & Gamble, 2011). Skocir revealed that among Slovenian Midwives only 50% correctly estimated the above proportion (Skočir & Hundley, 2006).

In Sri Lanka, EPDS is the only screening tool used to screen mothers for postpartum mental health disorders. All postpartum mothers at 1 month are screened with EPDS. PHMs usually provide this screening tool to all postpartum mothers who attend the 1month postnatal clinic visit

with the baby (Family Health Bureau, 2011). However, 75.7% of the PHMs were not aware of the purpose of using EPDS. This raises the question whether the administration of EPDS is implemented as expected at field level in Sri Lanka. Furthermore, only 66% of the PHMs correctly knew the cut-off score taken for EPDS. Similar study in Australia revealed similar proportion among Midwives on correct knowledge of EPDS (66.2%) (Jones, Creedy & Gamble, 2011).

Furthermore, this study revealed younger age groups (less than 50 years) are more knowledgeable in appropriate management of Postpartum Blues, mild Postpartum Depression and Postpartum Psychosis than older PHMs of 50 years or more. This is not confined to the knowledge on maternal mental health illnesses. Gunathunga and Fernando revealed that Sri Lankan PHMs knowledge in antenatal care was only 47.8% and 69.8% in natal and postnatal care, respectively and above knowledge decreased with increasing age and duration of service (Gunathunga & Fernando, 2000).

LIMITATIONS

Total PHMs in Sri Lanka is in excess of 5500 and our sample was only 434 (Family Health Bureau, 2018). Therefore, a risk of under-representation of sparsely populated districts exists.

CONCLUSION

This study highlights the major deficiencies on knowledge of PHMs in identifying and initial management of common maternal mental health disorders. Furthermore, significant proportion of PHMs did not know the uses and limitations of EPDS, which raise concerns about the field level implementation of EPDS as the screening tool for postpartum depressive disorders in all postpartum mothers. In addition to this, with increasing age, a diminishing knowledge in appropriate management of common postpartum mental health illnesses was observed. Therefore, health policy makers and administrators need to focus more on continuous professional development of PHMs and on updating the knowledge on maternal mental health among PHMs using the well-established Sri Lankan public health system of reviewing, supervision and in-service training.

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Table 1. Odds Ratios for knowledge on appropriate step in management of “Postpartum Blues”: Univariate and multivariate analysis

Dependent: knowledge on appropriate step in management of “Postpartum Blues”		Correct	Incorrect	OR (univariate)	OR (multivariate)
Age	50+ years	38 (16.7)	55 (27.2)		
	35-49 years	125 (54.8)	100 (49.5)	1.809 (1.108- 2.953, p=0.018)	1.922 (1.130-3.270, p=0.016)
	20-34 years	65 (28.5)	40 (23.3)	2.002 (1.145- 3.499, p=0.015)	2.249 (1.156-4.377, p=0.017)
Highest Educational Achievement	Degree	11 (4.8)	7 (3.5)		
	Diploma	99 (43.4)	61 (30.2)	1.033 (0.380-2.807, p=0.950)	1.088 (0.39-3.036, p=0.872)
	Advanced Level	110 (48.2)	120 (59.4)	0.583 (0.218- 0.155, p=0.282)	0.610 (0.222- 1.679, p=0.34)
	Ordinary Level	8 (3.5)	14 (6.9)	0.364 (0.101- 1.315, p=0.123)	0.306 (0.79- 1.182, p=0.086)
Stream of Education at Advanced Level	Physical Science	11 (4.8)	11 (5.4)		
	Art	95 (41.7)	74 (36.6)	1.284 (0.528-3.124, p=0.504)	0.723 (0.279- 1.871, p=0.504)
	Commerce	63 (27.6)	70 (34.7)	0.9 (0.365- 2.219, p=0.819)	0.418 (0.155-1.123, p=0.084)
	Bioscience	59 (25.9)	47 (23.3)	1.255 (0.501- 3.148, p=0.628)	0.798 (0.303- 2.100, p=0.648)
Having Children	Yes	188 (82.5)	162 (80.2)		
	No	40 (17.5)	40 (19.8)	0.862 (0.530- 1.401, p=0.548)	0.611 (0.338-1.105, p=0.103)
Major sector of population catered by PHM	Urban	47 (20.6)	26 (12.9)		
	Rural	174 (76.3)	167 (82.7)	0.576 (0.341- 0.973, p=0.039)	0.568 (0.330- 0.979, p=0.042)
	Estate	7 (3.1)	9 (4.5)	0.430 (0.144- 0.129, p=0.132)	0.628 (0.201- 1.965, p=0.424)
Received training on Maternal Mental Health Training	Yes	141 (61.8)	122 (60.4)		
	No	87 (38.2)	80 (39.6)	0.941 (0.638- 1.388, p=0.759)	0.916 (0.610- 1.376, p=0.672)

**Table 2. Odds Ratios for knowledge on appropriate step in management of “Mild Postpartum Depression”:
Univariate and multivariate analysis**

Dependent: knowledge on appropriate step in management of “Mild Postpartum Depression”		Correct	Incorrect	OR (univariate)	OR (multivariate)
Age	50+ years	38 (24.5)	55 (20.0)		
	35-49 years	141 (51.3)	84 (54.2)	1.160 (0.708- 1.900, p=0.556)	1.192 (0.701- 2.026, p=0.517)
	20-34 years	79 (28.7)	33 (21.3)	1.654 (0.926- 2.953, p=0.089)	2.118 (1.057- 4.244, p=0.034)
Highest Educational Achievement	Degree	11 (4.0)	7 (4.5)		
	Diploma	107 (38.9)	53 (34.2)	1.285 (0.471- 3.503, p=0.624)	1.386 (0.490- 3.918, p=0.538)
	Advanced Level	147 (53.5)	83 (53.5)	1.127 (0.421- 3.018, p=0.812)	1.205 (0.432- 3.363, p=0.721)
	Ordinary Level	10 (3.6)	12 (7.7)	0.530 (0.150- 1.880, p=0.326)	0.555 (0.146- 2.101, p=0.386)
Stream of Education at Advanced Level	Physical Science	12 (4.4)	10 (6.5)		
	Art	117 (42.5)	52 (33.5)	1.875 (0.762- 4.614, p=0.171)	1.421 (0.548- 3.688, p=0.470)
	Commerce	79 (28.7)	54 (34.8)	1.219 (0.492- 3.022, p=0.669)	0.879 (0.328- 2.354, p=0.797)
	Bioscience	67 (24.4)	39 (25.2)	1.432 (0.566- 3.619, p=0.448)	1.173 (0.445- 3.090, p=0.747)
Having Children	Yes	228 (78.7)	122 (78.7)		
	No	47 (17.1)	33 (21.3)	0.762 (0.464- 1.252, p=0.282)	0.485 (0.265- 0.889, p=0.019)
Major sector of population catered by PHM	Urban	47 (17.1)	26 (16.8)		
	Rural	217 (78.9)	124 (80.0)	0.968 (0.571- 1.640, p=0.904)	0.938 (0.545- 1.613, p=0.816)
	Estate	11 (4.0)	5 (3.2)	1.217 (0.381- 3.885, p=0.740)	1.540 (0.463- 5.122, p=0.482)
Received training on Maternal Mental Health Training	Yes	165 (60.0)	98 (63.2)		
	No	110 (40.0)	57 (36.8)	1.146 (0.764- 1.720, p=0.510)	1.090 (0.717- 1.658, p=0.686)

Table 3. Odds Ratios for knowledge on appropriate step in management of “Postpartum Psychosis” Univariate and multivariate analysis

Dependent: knowledge on appropriate step in management of “Postpartum Psychosis”		Correct	Incorrect	OR (univariate)	OR (multivariate)
Age	50+ years	48 (11.2)	45 (10.5)		
	35-49 years	85 (19.8)	140 (32.6)	0.569 (0.349- 0.927, p=0.024)	0.637 (0.377- 1.076, p=0.092)
	20-34 years	41 (9.5)	71 (16.5)	0.541 (0.309- 0.947, p=0.032)	0.456 (0.233- 0.891, p=0.022)
Highest Educational Achievement	Degree	8 (1.9)	10 (2.3)		
	Diploma	65 (15.1)	95 (22.1)	0.855 (0.320- 2.283, p=0.755)	0.728 (0.266- 1.993, p=0.536)
	Advanced Level	94 (21.9)	136 (31.6)	0.864 (0.329- 2.270, p=0.767)	0.660 (0.243- 1.791, p=0.415)
Stream of Education at Advanced Level	Ordinary Level	7 (1.6)	15 (3.5)	0.583 (0.160- 2.123, p=0.414)	0.359 (0.092- 1.404, p=0.141)
	Mathematics	14 (3.3)	8 (1.9)		
	Art	64 (14.9)	105 (24.4)	0.348 (0.138- 0.876, p=0.025)	0.382 (0.142- 1.024, p=0.056)
	Commerce	48 (11.2)	85 (19.8)	0.323 (0.126- 0.824, p=0.018)	0.356 (0.128- 0.990, p=0.048)
Having Children	Bioscience	48 (11.2)	58 (13.5)	0.473 (0.183- 1.222, p=0.122)	0.528 (0.194- 1.435, p=0.210)
	Yes	136 (31.6)	214 (49.8)		
	No	38 (8.8)	42 (9.8)	1.424 (0.873- 2.321, p=0.157)	2.013 (1.113- 3.642, p=0.021)
Major sector of population catered by PHM	Urban	24 (5.6)	49 (11.4)		
	Rural	145 (33.7)	196 (45.6)	1.510 (0.886- 2.575, p=0.130)	1.482 (0.856- 2.565, p=0.160)
	Estate	5 (1.2)	11 (2.6)	0.928 (0.290- 2.974, p=0.900)	0.714 (0.209- 2.438, p=0.591)
Received training on Maternal Mental Health Training	Yes	114 (26.5)	149 (34.7)		
	No	60 (14.0)	107 (24.9)	0.733 (0.492- 1.093, p=0.127)	0.763 (0.505- 1.155, p=0.201)