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PSYCHOLOGICAL STATE OF WOMEN FOLLOWING MISCARRIAGE AND ITS CORELATES

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ABSTRACT

Longer-lasting psychological, social, and health status changes can be expected following miscarriages. Analytical cross-sectional study design was conduct at National Hospital-Kandy. Women admitted to THK fallowing miscarriage was the study population and pregnancies below 24 weeks of gestation was included. Systematic random sampling technique was applied for sample selection. Interviewer administered questionnaire and 12 item general health questionnaire were used as study instruments. A total of 391 responses were obtained. Mean age of the participants was 29.31 yrs(SD=6.02 yrs). The mean POA at which the miscarriage was 9.68 (SD=3.83). The majority of mothers have agreed with the fact that they endured all-time stress throughout the last two weeks (n=207:52.9%). Majority of mothers had suffered moderate stress throughout the study period (n=249:63.7%) and moderate level of social withdrawal following the miscarriage (n=225:57.5%). Poor level of general psychological status was experienced by 9.2% of the participants (n=36). General psychological status of the study participants was significantly associated with age ($p<0.001$), Occupation ($p<0.001$), educational status ($p<0.001$), alcoholic husband ($p<0.001$), history of subfertility ($p<0.001$), and the menstrual history ($p<0.001$). Distress and anxiety are the most common psychological disorders identified following a miscarriage. Maternal care service packages should be modified in order to facilitated communication between females and relevant public health officials regarding essential post abortion care protocols at the time of getting discharged from the hospitals.

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INTRODUCTION

Miscarriage is defined as involuntary termination of a nonviable intrauterine pregnancy before 24 weeks of POA. This is a common complication (1) (2). One third of women experience miscarriage sometime during their life time and one fifth of pregnancies end up in a miscarriage (4). In majority of patients, this psychological morbidity decreases within 3-4 months and recover naturally. Around 50% of women suffer psychologically months after the loss. Some patients have sustained symptoms of grief and depression late as one year. A proportion will develop clinical depression which require treatment (6). But this depression after spontaneous abortion is often unrecognized by medical professionals. It also had proven interactive management of miscarriage and identification of the possible cause for miscarriage reduces the feelings of self-blame.

In western countries, the psychological impact of pregnancy loss had been researched thoroughly. In Sri Lanka only, few studies show the relationship between psychological morbidity after pregnancy loss (3). Studies mainly focused on the prevalence of depression and pathological grief following miscarriage (3) (4). Although emerging evidence of western population and limited evidence have highlighted the psychological morbidity where psychological interventions are potentially beneficial, simple and effective measures of screening and support have not been well established yet. In RCOG guideline management of miscarriage, it is recommended to guide patient to peer support groups and appropriate counselling body but not as integral part of routine patient care of miscarriage.

METHODS

Analytical cross-sectional study design was conducted at National Hospital-Kandy. Spontaneous miscarriage below 24 weeks of POA diagnosed by a Consultant Obstetrician after ultra sound scan were included. 391 participants were selected following systematic random sampling technique. The participants completed a standardized general health questionnaire. Depression was assessed by using a standard depression questionnaire. Grief was assessed by using the Perinatal Grief Scale and anxiety via anxiety scale. Diagnosis of depressive disorder or anxiety disorder was made according to the ICD-10 clinical criteria based on the standard questionnaire score. Data analysis was done by using Statistical Package for Social Sciences (SPSS) version 27.0. All categorical variables were described by using frequencies and percentages. Ratio scale data were described by using measures of central tendency. Throughout this research, procedures were not included. Data collection

and counseling were done by the researcher or trained competent medical officers who appreciate the sensitive mental condition following loss of a pregnancy.

RESULTS

There were both planned and unplanned pregnancies amongst the study group. There were higher number of planned pregnancies (n=246:62.9%) than the number of unplanned pregnancies (n=145:37.1%). In this study, among these mothers, 170 mothers experienced the miscarriage with their second pregnancy and it accounts for the highest number (n=170:43.5%) of total mothers subjected in this study. The lowest number of mothers endured the miscarriage with their fourth pregnancy (n=41:10.5%).

Mothers subjected to this study were at different levels of their pregnancy when the miscarriage took place. Most of the mothers were at the pregnancy period of 8 to 11 weeks of POA (n=153:39.2%) while mothers above 12 weeks of POA were the lowest number (n=117:29.9%). The earliest period of pregnancy the miscarriage was endured was at 4 weeks of POA. Conversely, the latest was at 20 weeks of POA. The mean POA at which the miscarriage was experienced by these mothers was 9.68 (SD=3.83)(Table1). A higher majority of the participants did not have any history of subfertility (n=339:86.7%). Nevertheless, a lower number of the participants had a history of subfertility (n=52:13.3%). Furthermore, mothers who had a regular menstrual history were considerably higher in number (n=287:73.4%) than the mothers who had an irregular menstrual history (n=104:26.6%). Moreover, among the mothers who took part in this study, more than a half of the study group had no POA history (n=246:62.9%). At the same time, nearly one third of the participants had a POA history (n=145:37.1%)(Table 1) .

For the general health questions asked from the mothers who endured miscarriage, for each statement, participants had responded with different levels of agreement. Higher number of participants have claimed that they agree with the fact that they could pay attention to the work done within the last two weeks (n=197:50.4%). In addition, no one had any neutral opinion for this statement (Table 2).

A large fraction of the mothers has agreed with the statement that says they have lost their sleep within the last two weeks (n=157:40.2%). Among the participants, a higher fraction of mothers had agreed with the fact that they were satisfied with their work within the last two weeks prior to the time of study (n=133:34.0%). When asked about the participants' ability in decision making, nearly half of the participants agreed with the statement that they could make decisions in day-to-day work within the last two weeks (n=197:50.3%).

Table 1: Characteristics related to current pregnancy

	Frequency (n)	Percentage (%)
Preparation of pregnancy		
Planned	246	62.9
Unplanned	145	37.1
Parity		
1.00	105	26.9
2.00	170	43.5
3.00	75	19.2
4.00	41	10.5
POA		
< 7 Weeks	121	30.9
8-11 Weeks	153	39.2
>12 Weeks	117	29.9
History of Sub-fertility		
Yes	52	13.3
No	339	86.7
Menstrual History		
Regular	287	73.4
Irregular	104	26.6
POA		
Yes	145	37.1
No	246	62.9
Total	**391**	**100.0**

POA=Period of Amenorrhea

In terms of the stress these participants experience, the majority of mothers have agreed with the fact that they endured all-time stress throughout the last two weeks (n=207:52.9%). In addition, a higher number of participants thought that it was difficult to solve their problems throughout the last two weeks before the time of the study (n=170:43.5%) (Table 2). Furthermore, when asked whether the participant was satisfied with their day-to-day work within the last two weeks prior to the time of the study, a considerably higher number of participants had agreed with the statement (n=259:66.2%).

Table 2: Response to General health Questionnaire

Statement	Strongly Agreed N(%)	Agreed N(%)	No Idea N(%)	Do not Agree N(%)	Never Agree N(%)
Within last two weeks, could you pay attention to your work done					
	63(16.1)	197(50.4)	-	119(30.4)	12(3.1)
Within last two weeks, Have you lost sleep					
	48(12.3)	157(40.2)	39(10.1)	135(34.5)	12(3.1)
Within last two weeks, were you satisfy with your work					
	100(25.6)	133(34.0)	68(17.4)	78(19.9)	12(3.1)
Within last two weeks, could you make decision in day to day work					
	50(12.8)	197(50.3)	40(10.2)	92(23.5)	12(3.1)
Within last two weeks, do you feel stressed all the time					
	12(3.1)	207(52.9)	26(6.6)	134(34.3)	12(3.1)
Within last two weeks, do you think that it is difficult to resolve your problem					
	12(3.1)	170(43.5)	53(13.6)	144(36.8)	12(3.1)
Within last two weeks, Were you satisfied from your day to day work					
	36(9.2)	259(66.2)	41(10.5)	55(14.1)	-
Within last two weeks, could you face difficulties					
	27(6.9)	177(45.3)	97(24.8)	78(19.9)	12(3.1)
Within last two weeks, Are you unhappy or worried					
	77(19.7)	174(44.5)	14(3.6)	102(26.1)	24(6.1)
Within last two weeks, do you feel not motivated					
	39(10.0)	117(29.9)	82(21.0)	114(29.2)	39(10.0)
Within last two weeks, do you feel worth less					
	-	51(13.0)	42(10.7)	235(60.1)	63(16.1)
Within last two weeks, Were you happy as usual					
	76(19.4)	116(29.7)	26(6.6)	173(44.2)	-

A slightly less than half of the participants had agreed with the statement that they could face difficulties within the period of study (n=177:45.3%). A two-fifth of the respondents had agreed with the statement that they were unhappy or worried within the previous two weeks (n=174:44.5%). With regard to motivation, nearly a similar number of mothers had agreed (n=117:29.9%) and did not agree (n=114:29.2%) with the question whether they felt motivated in the previous two weeks. A majority of the participants had not agreed (n=235:60.1%) with the statement which questions whether they felt worthless in the previous two weeks. Furthermore, none of the participants had strongly agreed with this statement. Lastly, a higher number of respondents had disagreed with the fact that they were as happy as usual (n=173:44,2%). No one in the participant group had agreed with this statement (Table 2).

Table 3: Distribution of Psychological status of the study participants

	Frequency(n)	Percentage (%)
Distress		
Distressed	103	26.3
Moderately Distressed	249	63.7
No Distress	39	10.0
Anxiety		
Anxious	95	24.3
Moderately anxious	260	55.5
No Anxious	36	9.2
Socially Dysfunction		
Withdraw	91	23.3
Moderately withdraw	225	57.5
Normal	75	19.2
General psychological Status		
Poor	36	9.2
Moderate	306	78.3
Good	49	12.5
Total	**391**	**100.0**

Table 4: Association of General Health status and the characteristics with the individual

Variable	General Psychological status			X^2 Square	P Value
	Poor	Moderate	Good		
Age-Participant					
< 25 Yrs	24	90	12		
26-30 Yrs	-	72	-	61.12	<0.001
31-35 Yrs	-	102	25		
>36 Yrs	12	42	12		
Age_Spouse					
< 25 Yrs	-	64	-		
26-30 Yrs	12	85	-		
31-35 Yrs	12	41	13	107.1	<0.001
36-40 Yrs	-	74	36		
< 41 Yrs	12	42	-		
Occupation-Individual					
Housewife	24	198	49		
Non-Executive	12	96	-	26.48	<0.001
Professional	-	12	-		
Education					
Up to O/L	-	133	49		
Passed A/L	36	123	-	112.4	<0.001
Graduated	-	50	-		
Alcoholic Husband					
Yes	-	65	25	42.8	<0.001
No	36	241	24		
Pregnancy Preparation					
Planned	24	185	37	4.34	0.114
Unplanned	12	121	12		
Subfertility					
Yes	12	28	12	22.4	<0.001
No	24	278	37		
Menstrual History					
Regular	12	238	37	32.7	<0.001
Irregular	24	68	12		
Contraceptive Used					
Yes	12	120	13	3.15	0.207
No	24	186	36		
Total	**36**	**306**			

Among the mothers who participated in the study, the majority of mothers had suffered moderate stress throughout the study period (n=249:63.7%). Only a smaller number of mothers had responded that they did not experience any stress following the event of miscarriage (n=39:10.0%). Furthermore, with regard to the anxiety experienced among the post-miscarriage mothers, a greater number of the mothers endured a moderate level of anxiety (n=260:55.5%) than other two levels of anxiety namely anxious (n=95:24.3%) and not anxious (n=36:9.2%)(Table 3).

Another psychosocial feature in which the participants were evaluated was social dysfunction. This was categorized into three levels; withdrawn from society, moderate level of social withdrawal and no withdrawal. Nearly half of the study group had gone through a moderate level of social withdrawal following the miscarriage (n=225:57.5%), while proportion of the number of mothers who had normal social interactions accounted for the lowest (n=75:19.2%). In terms of the general psychological status, more than three fourth of the participants experienced a moderate level of general psychological status(n=306:78.3%) whereas a fewer proportion of the study group experienced a poor level of general psychological status (n=36:9.2%)(Table 3).

General psychological status of the study participants were significantly associated with age ($p<0.001$), Occupation($p<0.001$), educational status($p<0.001$), alcoholic husband($p<0.001$), history of subfertility($p<0.001$), and the menstrual history($p<0.001$). Contraceptive use and preparation of pregnancy were not associated with general psycological status of the study participants.

DISCUSSION

Distress (26.3%), Anxiety (24.3%), and social dysfunction (23.3%) are seen at a significant level after an abortion. Also, it is significantly associated with general psychological status, age of the relevant individual, educational level, husband's characteristics, prepared pregnancy. Younger women and older women are more prone to poor psychological state. It can also be seen that housewives and well-prepared pregnant women are more prone to poor psychological state. However, it was not shown that women with alcoholic husbands were prone to poor psychological state.

As mentioned by Galeoti et al, the educational level and social status of a person who has had an abortion has a great impact on her and her husband's mental health. The results of this study further confirm the situation. The results of the current study have shown that higher education, employment status and family conditions are associated with the decline in the

mental level of a woman who has had an abortion(1). Flennary et al (2020) clearly stated that during the post abortion period, 17% of women are anxious, 6% are depressed, and 16% are in post-traumatic stress situations. The current study results can also be identified from very similar situations(2). Accordingly, the confirmatory validity of the current study results is established. As indicated by Barbe Hayiyan and Chennun, psychological distress in the post-abortion period also affects subsequent pregnancies(3). The study shows that the initial depression can lead to recurrent miscarriages. Since a follow up component was not implemented in the current study, this finding cannot be compared. However, a suggestive hypothesis was generated.

Psychological care for women who undergo spontaneous pregnancy loss is considered inadequate in many countries. However, there is growing awareness within the medical community about this gap in care, which has received significant attention, particularly since a series of publications on this subject in The Lancet(4–6). Despite ample data indicating that psychological disorders are unfortunately common and often severe following miscarriage, the existing literature lacks a scientifically validated consensus on the optimal management for this specific situation. The findings of current studies further support this hypothesis. Therefore, we strongly believe that there is a compelling need to generate new and scientifically rigorous evidence to establish efficacy data for managing psychological disorders in women who have experienced miscarriage, particularly within the Sri Lankan context.

Through this study, it has been testified that, the post miscarriage women have endured a moderate or poor psychological distress. By involving more number of individuals, in a multi central context including island wide centers could bring more generalizable and more useful findings. Furthermore, by improving this particular study instrument with the help of extensive literature review and expert opinion, targeting specifically the post miscarriage women's general psychological status, the tool can be used to derive more reliable and valid results. Moreover, such valid and reliable research findings can be implemented in cost effective, therapeutic and preventive interventions in managing post miscarriage women. Besides, psychological status depends on numerous confounding factors including personal, psychosocial and economical background of the patient. Therefore, a sample with higher level of heterogeneity should be employed in the future studies to obtain more generalizable results. These factors should be considered important when expanding this research.

CONCLUSIONS

Distress and anxiety are the most common psychological disorders identified among pregnant mothers following a miscarriage. It is possible to identify a moderately poor psychological status among majority of the pregnant mothers following a miscarriage. According to the observations following a miscarriage, females experience a social dysfunctional situation up to a certain extent. It is possible to identify that general psychological status of a women who experienced a miscarriage is associated with the sociodemographic and environmental factors such as occupation, age and educational status of the women and her husband.

All the females who are admitted to hospitals for post abortion care should be integrated into psychological counselling sessions while they are being treated at the hospital. Maternal care service packages should be modified in order to facilitated communication between females and relevant public health officials regarding essential post abortion care protocols at the time of getting discharged from the hospitals. Policy makers attention should be focused on essential and relevant structural modifications to implement this procedure. During pre-pregnancy sessions, special attention should be focused on threat of miscarriage and post abortion care.

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