

# A descriptive cross sectional study on mental health outcome and perceived care needs following miscarriage in a tertiary care hospital in Sri Lanka

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## Abstract

### Introduction

Miscarriage increases women's risk for psychiatric disorders such as depression, anxiety and stress and can also lead to a threat to life. Hospital environment and provision of appropriate clinical information to the client is an important determinant in prevention of psychological distress. The aim of our study was to describe the psychosocial consequences of miscarriages, its correlates and perceived needs in the care provided by the hospital.

### Method

A descriptive cross sectional study was carried out in the Colombo South Teaching Hospital in 405 consecutive women admitted with first trimester miscarriages to the Gynaecology wards. An interviewer-administered study specific questionnaire was used to collect information on demographic details and Depression Anxiety Stress Scale (DASS) was used to assess psychosocial consequences.

### Results

Out of the 405 women studied, 55.7% met the cut-off scores for depression, 66.6% for anxiety and 50.2% for stress. The symptoms of depression, anxiety and stress were severe in 14%, 40% and 18% respectively. Women who have taken treatment for subfertility had significantly higher depressive ( $p=0.01$ ) and anxiety symptoms ( $p=0.02$ ). The attending doctors not listening to concerns, not explaining the condition and not explaining the treatment methods were significantly associated with symptoms of depression, anxiety and stress. ( $p=0.02$ ).

### Discussion

Anxiety was the most common psychological condition detected following miscarriage followed by depression and inadequacies of service provision at the hospital have contributed significantly to the experience of emotional distress. Provision of correct information, validation of distress and psychological debriefing, may be useful in enabling women to adjust emotionally following miscarriage.

**Key words:** Miscarriage, depression, anxiety, quality of care

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## Introduction

Miscarriage is a pregnancy loss prior to viability<sup>1</sup>, the loss of a fetus weighing less than 500 g (World Health organization – WHO), and loss of an embryo or fetus at 20 weeks gestation or less<sup>1</sup>. Nearly one in four pregnancies can end in miscarriage<sup>2</sup>. It is considered as an isolated medical problem and treated in a mechanical and physical manner by either the medical community or the woman's social support network, considering that the woman will quickly recover with no lasting psychological effects<sup>3,4</sup>.

As with other stressful events, the effects of miscarriage vary considerably across individuals<sup>5</sup>. Most women and their partners consider miscarriage as a tragic, complicated, and life-altering experience causing emotional and psychological distress result with significant suffering<sup>6-11</sup>. Women who experience miscarriage also worry about future pregnancies and some may perceive subsequent pregnancies as “precious and valuable”<sup>7</sup>.

Miscarriages also increases women's risk for psychiatric symptoms and disorders and can also lead to a threat to the life. Previous literature has described grief, depression and anxiety to occur frequently following miscarriage. Post Traumatic Stress Disorder and obsessive compulsive disorder has also been reported<sup>8</sup>. Childlessness, planned pregnancy, past psychiatric history, receiving surgical treatment following pregnancy and seeing a viable fetus on ultrasound scan prior to miscarriage have all been reported to be associated with a higher rates of psychological morbidity but there is controversy where and when the levels of depressive symptoms are elevated<sup>9,10</sup>. Expression of grief and depression may show cultural variation and coping strategies may differ depending on culture, racial or ethnic background<sup>11,12</sup>. When open expression of emotions such as sadness is considered inappropriate in certain cultures they may tend to somatize their distress<sup>13</sup>.

Previous literature has shown that women were dissatisfied about how they were treated in both hospital and community settings. Associations between the attitude of healthcare staff and the physical and emotional recovery of women following miscarriage have been documented<sup>14</sup>. Lack of clear-cut medical explanations about the miscarriage and its causes have been noted to promote parental guilt and self-blame<sup>15,16</sup>.

Miscarriage, although a common event in pregnancy, a very few studies have been carried out in Sri Lanka with regard to the psychosocial effects following miscarriages. The aim of our study is was to describe the psychosocial consequences of miscarriages, its' correlates and perceived needs in the care provided by the hospital, and this could shed some light on possible preventive strategies.

## Method

A descriptive cross sectional study was carried out in the Colombo South Teaching Hospital. Four hundred and five consecutive women, admitted to the three Gynaecological wards with first trimester miscarriage during March to September 2017 were recruited. The socio-demographic details, the participants experience of care received at the hospital and perceived care needs of participants were collected using specifically designed questionnaires. The DASS was used to collect data on psychological morbidities. The DASS is a 21-item self-report instrument designed to measure the three related negative emotional states of depression, anxiety and tension/stress<sup>17</sup>. The validated Sinhalese translation was used for this research<sup>18,19</sup>. In completing the DASS, the individual is required to indicate the presence of a symptom over the previous week. Each item was scored from 0 (“did not apply to me at all over the past week”) to 3 (“applied to me very much or most of the time over the past week”). It was also designed to get data on the perceived care they received at the hospital and their expectations about the services at the hospital.

A trained physician collected data shortly before the participants were discharged from the hospital. Completion of the questionnaire took about 20-30 minutes. The Ethical Review Committee of the University of Sri Jayewardenepura granted ethical approval and written permission to carry out the study was obtained from the hospital director and consultants in charge of wards. Informed written consent was obtained from all participants. Women identified with specific psychological morbidities were referred to a psychiatrist.

Percentages, 95% confidence intervals, significances using t tests and chi-squared tests were calculated using Statistical Packages for Social Sciences version 20.

## Results

Nearly 80% of the sample was less than 35 years of age and majority (66.6%) of them were employed. Our sample mainly consisted of multigravida (61%) and half of them had at least one living child (Table 1). Most of the pregnancies (58%) were planned and 23% of women had experienced at least one miscarriage in the past. Only 5 percent of the study population had a previous subfertility. In the present pregnancy, 19 percent of women had a complete miscarriage and 55% had incomplete miscarriage (Table 2).

**Table 1. Socio-demographic details of the women admitted with miscarriage (n=405)**

	Percentage	95% Confidence Interval	
<b>Age in years</b>			
Less than 25	22.0	17.7	26.9
26-30	30.8	25.9	36.2
31-35	25.9	21.3	2231.1
More than 35	21.3	17.1	26.2
Employed	66.6	61.1	71.6
<b>Education level</b>			
Passed ordinary Level	46.6	41	52.2
Multigravida	61.0	55.4	66.3
One or more living children	50.5	45	56.1

**Table 2. Pregnancy related details (n=405)**

	Percentage	95% Confidence Interval	
<b>Current pregnancy</b>			
Planned	58.0	52.4	63.4
Past history of miscarriages	23.2	18.9	28.3
Presence of history of subfertility	5.2	3.2	8.3
<b>Type of miscarriage</b>			
Complete	19.0	15	23.8
Incomplete	54.8	49.1	60.2
Missed	26.2	21.6	31.4

**Table 3. Occurrence of psychological morbidities and there severity (n=405)**

	Percentage	95% Confidence Interval	
<b>Depression</b>			
No	44.3	38.8	50
Mild	7.9	5.3	11.4
Moderate	23.6	19.2	28.7
Severe	14.4	10.9	18.8
Extremely severe	9.8	7	13.7
<b>Anxiety</b>			
No	33.4	28.4	38.9
Mild	8.5	5.9	12.2
Moderate	17.7	13.8	22.4
Severe	8.5	5.9	12.2
Extremely severe	31.8	26.8	37.2
<b>Stress</b>			
No	49.2	43.6	54.8
Mild	15.4	11.8	19.9
Moderate	16.7	12.9	21.3
Severe	13.8	10.3	18.1
Extremely severe	4.9	3	7.9

Seventy two point one percent of women experienced either depression, anxiety or stress and 41.3% experienced a combination of all three (Table 3). Women who conceived following treatment for subfertility had significantly more depressive (p=0.01) and anxiety (p=0.02) symptoms.

**Table 4. Association of variables with types of psychological morbidities (n=405)**

		Depression		Anxiety		Stress	
		No	Present	No	Present	No	Present
Age in years (Mean)		30.74	30.24	30.26	31.03	30.69	30.33
	Significance (p)		0.48		0.30		0.61
Employment	Yes	40	62	32	70	46	56
	No	95	108	70	133	104	99
	Significance (p)		0.21		0.59		0.31
Parity	First	55	64	40	79	64	55
	More than one	80	106	62	124	86	100
	Significance (p)		0.58		0.96		0.19
Living children	No	61	90	45	106	73	78
	Yes	74	80	57	97	77	77
	Significance (p)		0.18		0.18		0.77
Subfertility	Yes	6	9	4	11	6	9
	No	129	144	98	175	138	135
	Significance (p)		0.58		0.47		0.43
Type of miscarriage	Viable	35	45	29	51	110	35
	Non viable	100	125	73	152	115	45
	Significance (p)		0.91		0.53		0.43

*Continued*

		Depression		Anxiety		Stress	
		No	Present	No	Present	No	Present
Planning of pregnancy	Planned	73	104	59	118	82	95
	Unplanned	62	66	43	85	68	60
	Significance (p)		0.21		0.96		0.24
Education level	Less than O/L	71	92	53	110	79	84
	O/L or more	64	78	49	93	71	71
	Significance (p)		0.79		0.71		0.79
Taken treatment for subfertility	Yes	7	15	5	17	10	12
	No	122	72	95	99	118	76
	Significance (p)		0.01		0.02		0.16

**Table 5. Patients' description of the services received and expectations at the hospital**

Patients description of the services received and expectations at the hospital	Depression		Anxiety		Stress	
	No	Present	No	Present	No	Present
They listened to my concerns	81	93	83.7	92.1	84.5	88.6
Significance (p)	<0.01		0.05		0.32	
Explained about the condition	63.5	92.5	68.4	92.1	69	84
Significance (p)	<0.01		<0.01		<0.01	
Explained about treatment methods	61.7	74.8	65.5	71.5	61.9	73.3
Significance (p)		0.01		0.3		0.04
Participated in decision making	52.3	61.4	55.1	58.8	52.9	60
Significance (p)	0.06		0.62		0.25	
Satisfaction with services	86.4	94.8	88.6	93.1	89	91.3
Significance (p)	0.01		0.31		0.57	
Expects understanding	31.7	36.2	32	37	34.8	32.6
Significance (p)	0.24		0.37		0.72	
Expects explanations	41.7	37.7	38.4	43.1	39.3	40.6
Significance (p)	0.29		0.46		0.82	
Expects education on treatment	52.3	32.5	46.7	37.2	52.2	34.6
Significance (p)	<0.01		0.14		<0.01	
Expects participation in decision making	38.2	29.6	34.4	34.3	36.1	32
Significance (p)	0.14		1		0.55	
Expects more opportunities for questions	38.2	28.8	33.9	34.3	35.4	32.6
Significance (p)			1		0.63	

Depression, anxiety and stress were significantly less among women admitted with miscarriage who were satisfied with the care received at the hospital (Table 5).

## Discussion

Seventy two percent of women who presented with a miscarriage had some psychological disturbance with anxiety (66.6%) being the commonest, followed by depression (55.7%) and stress (50.2%). Severe depression, anxiety and stress found in our study were 14%, 40% and 18% respectively. Previous studies carried out from 1990 to 2003 revealed anxiety to be around 40-50% and depression around 20% in women, who had experienced a miscarriage<sup>20</sup>. Even though, our finding is comparable with the international literature, a previous study done in Sri Lanka showed lower rates of psychological morbidity, with only 42.4% screening positive for psychological morbidity by the GHQ-30<sup>21</sup>. Previous literature has shown depressive symptoms in 20-50% and anxiety symptoms in 20-40% of women shortly after miscarriage. As past literature has shown the psychological distress is highest shortly after the miscarriage and decreases with time, one explanation of this difference maybe the difference in timing of the assessment. Earlier the assessment the more severe the psychological morbidity would be<sup>20</sup>. Anxiety, stress, early complicated grief may also have an overlapping effect on relatively high rate of psycho-logical morbidities in our study.

In the present study, a history of subfertility was the only patient factor that was significantly associated with higher rates of depression and anxiety. In contrast, several factors related to patients' experience of service provision was significantly associated with symptoms of depression, anxiety and stress. Patients who felt that their concerns were not listened to and that the information provided about the miscarriage and its treatment was not adequate had significantly more stress, anxiety and depressive symptoms.

As a high percentage of women experience depressive and anxiety symptoms following miscarriage, screening women presenting with miscarriages for psychological distress would be an important step in identifying those at risk of developing these disorders and would be helpful in deciding whether a referral to a mental health services is appropriate. Previous literature has revealed that the level of anxiety and depressive symptoms gradually decrease with time and return to normal by about 12 months<sup>14</sup>. Therefore, follow-up of these women for longer periods once discharged from the hospital would be helpful in identifying those whose

symptoms persist, and these patients could be referred for psychiatric services for further assessment. In Sri Lanka, one possibility of achieving this maybe by arranging follow-up visits by a Public Health Midwife with administration of a structured screening tools at regular intervals.

As less satisfaction with service provision was associated with the presence of psychological distress, consideration should be given on how to improve the current practice to reduce the psychological burden on patients. Our study suggests that validating the patients concerns and giving more explanations about the miscarriage and its treatment would be useful in reducing psychological distress. Previous studies propose that better preparation for a miscarriage by increasing awareness of the frequent occurrence of miscarriages, an empathetic and sensitive approach by the staff, and providing reassurance about future pregnancies may be useful. Increasing awareness among hospital staff about the high frequency of depressive symptoms, anxiety and stress following miscarriage would be important; as it would help the medical staff to adopt a more sensitive approach towards their patients.

Evaluation of the emotional response of the male partner may also be important as previous studies have indicated that male partners were emotionally affected and went through a grieving process.

## Conclusions and future directions

Differences in the emotional disturbances reported in different studies, may be overcome by the use of standardized assessment instruments and methodologies. Quality of care received following miscarriage need more attention. Psychological debriefing, may be useful in enabling women to adjust emotionally following miscarriage

## Declarations

### 1. Ethics approval and consent to participate

Ethical approval was granted by the Ethics Review Committee, Faculty of Medical Sciences, University of Sri Jayewardenepura, Which is a SIDCER/FERCAP recognized Ethics Review Committee in Sri Lanka. Verbal and written consent were sought and received from all participants. Information about the confidentiality

and safe storage of the data was provided both orally and in writing. The participants were informed that they could withdraw their participation at any time without consequence. Confidentiality was protected as the interviews were conducted in a private room where conversations could not be overheard, and only researchers involved in the study had access to the interview material.

**2. Consent for publication**

Not applicable

**3. Availability of data and materials**

The datasets used and analyzed as part of this study are not publicly available in order to maintain the confidentiality of the participants.

However, all transcripts are available from the corresponding author on reasonable request.

**4. Funding**

This study was self-funded

**5. Authors' contributions**

PRP was the principal investigator and conceived the hypothesis for this manuscript. PRP, RYM and KST designed the research and sought ethical approval. RYM conducted all face-to-face interviews with support from PRP and KST. NAAN performed the statistical analysis under the guidance of PRP and RYM and KT and contributed to the interpretation of the findings. All authors have critically revised and approved the final version of the manuscript.

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**References**

1. Repeated miscarriage (ACOG Education Pamphlet AP100), American College of Obstetricians and Gynecologists. Washington, DC: Author; 2009.
2. Kevin Langand Ana Nuevo-Chiquero, Trends in Self-reported Spontaneous Abortions: 1970-2000, Demography. 2012 Aug; 49(3): 989-1009.
3. Geller PA, Psaros C, Kornfield SL. Satisfaction with pregnancy loss aftercare: are women getting what they want? Arch Womens Ment Health. 2010 Apr; 13(2): 111-24. Epub 2010 Feb 23.
4. Conway K. Miscarriage. Journal of Psychosomatic Obstetrics and Gynecology 1991; 12: 121-31.

5. Swanson KM, Connor S, Jolley SN, Pettinato M, Wang TJ, Contexts and evolution of women's responses to miscarriage during the first year after loss. Res Nurs Health. 2007 Feb; 30(1): 2-16.
6. Swanson KM. 1999a Measuring the meaning of miscarriage: revision of the Impact of Miscarriage Scale. J Nurs Meas. 2014; 22(1): 29-45.
7. DeLuca RS, Lobel M. Conception, commitment, and health behavior practices in medically high-risk pregnant women. Womens Health. 1995 Fall; 1(3): 257-71.
8. Lok IH, Neugebauer R. Psychological morbidity following miscarriage. Best Pract Res Clin Obstet Gynaecol. 2007; 21(2): 229-47.
9. Beutel M, Deckardt R, von Rad M, Weiner H. Grief and depression after miscarriage: their separation, antecedents, and course. Psychosom Med. 1995 Nov-Dec; 57(6): 517-26.
10. Brier N. Anxiety after miscarriage: a review of the empirical literature and implications for clinical practice. Birth. 2004; 31(2): 138-42.
11. Kirmayer LJ. Cultural variations in the clinical presentation of depression and anxiety: implications for diagnosis and treatment. J Clin Psychiatry. 2001; 62 Suppl 13: 22-8; discussion 29-30.
12. Lok IH, Neugebauer R. Psychological morbidity following miscarriage. Best Practice & Research Clinical Obstetrics & Gynaecology. 2007 Apr 30; 21(2): 229-47.1
13. Kirmayer LJ, Robbins JM, Dworkind M, Yaffe MJ. Somatization and the recognition of depression and anxiety in primary care. Am J Psychiatry. 1993 May; 150(5): 734-41.
14. Adolfsson A, Larsson PG, Wijma B, Berterö C. Guilt and emptiness: women's experiences of miscarriage. Health Care for Women International 2004; 25: 543-60.
15. Meaney S, Corcoran P, Spillane N, O'Donoghue K. Experience of miscarriage: an interpretative phenomenological analysis, BMJ Open. 2017; 7(3): e011382.
16. Ruth Stirtzinger G. Erlick Robinson: The psychological effects of spontaneous abortion. CMAJ 1989 April; 140: 799-805.
17. DASS 21 scale. <http://www2.psy.unsw.edu.au/dass/DASSFAQ.htm>
18. Rekha A. Adaptation and Validation of the Depression Anxiety and Stress Scale (DASS21) among students in the University of Colombo. Annual Research Symposium 2012, University of Colombo. [http://archive.cmb.ac.lk:8080/research/bitstream/70130/3898/1/Adaptation\\_and\\_validation.PDF](http://archive.cmb.ac.lk:8080/research/bitstream/70130/3898/1/Adaptation_and_validation.PDF)
19. Suraweera C, Hanwella R, Sivayokan S, de Silva V. Rating scales validated for Sri Lankan populations. SL J Psychiatry 2013; 4 (2): 16-24. <https://sljpsyc.sljol.info/article/10.4038/sljpsyc.v4i2.6320/galley/4947/download/>
20. Bradshaw Z, Slade P. The effects of induced abortion on emotional experiences and relationships: a critical review of the literature. Clin Psychol Rev. 2003 Dec; 23(7): 929-58.
21. Wijesooriya LRA, Palihawadana TS, Rajapaksha RNG. A study of psychological impact on women undergoing miscarriage at a Sri Lankan hospital setting. Sri Lanka Journal of Obstetrics and Gynaecology June 2015.