

Evaluation of the psychological distress experienced by spouses of women undergoing anaesthesia for caesarean section

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Abstract

Background: Caesarean section (CS) could serve a challenging situation to spouses and family of women, more so as these women are meant to undergo anaesthesia. Little evidence exists with regard to the psychological impact of this on these families.

Aim: The study was aimed to evaluate psychological distress among spouses of women undergoing anaesthesia for CS and also to identify the coping strategies used by the participants.

Methods: Ninety-one husbands of women undergoing anaesthesia for CS were consecutively recruited. They were given a self-administered study protocol consisting of sociodemographic questionnaire, General Health Questionnaire (GHQ-12) and the Brief Cope Inventory. $P < 0.05$ was considered statistically significant.

Results: Fifty participants (54.9%) were found to have psychological distress (GHQ of 3 and above). Psychological distress was significantly more amongst younger participants (20–39 years' age group: 100% and 30–39 years' age group: 57.4%, $P < 0.05$). A significantly higher proportion (72.4%) of participants were unemployed, whereas those without previous experience of birth (85.0%) had psychological distress ($P < 0.05$). However, employment status (OR=3.5; 95%CI; 1.24-9.98) and previous birth experience [(OR 95% CI, 6.3 (1.59 - 24.78))] predicted the outcome of psychological distress among the participants on multivariate analysis. The mean scores on the coping subscales of substance use, positive reframing, planning and self-blame were significantly higher among those with psychological distress in comparison to those without psychological distress ($P < 0.05$).

Conclusion: The prevalence of psychological distress is high among the husbands of women undergoing anaesthesia for CS. Substance use, positive reframing, planning and self-blame were more observed among those with psychological distress.

Keywords: Anaesthesia, caesarean section, coping strategy, psychological distress

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INTRODUCTION

Psychological distress, frequently used as an indicator of mental health of a given population, is often neglected. It

is an emotional disturbance that may impact on the social functioning and day-to-day life of an individual. While it has long been established that providing care for an ill patient can increase the psychological burden of the family

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caregiver,¹ the extent of impact of care provision on a family caregiver is yet to be fully elucidated.

Caesarean section (CS) has been described as one of the most common hospital-based surgeries.² The anticipation of surgery and the thought of undergoing anaesthesia could be challenging not only to the women involved, but also to the spouses who in most cases would serve as the primary caregivers. Although some sizeable studies might have been undertaken with regard to the emotional aspects of CS on women,^{3,4} little is known about the psychological impact of this situation on the spouses of these women undergoing anaesthesia for CS. The spouse of a parturient, so often ignored, is not only significantly supportive in the care of the pregnancy and birthing process, but also bears additional responsibilities of increased financial demands and caring more for his spouse and the newborn.⁵

As in our environment spouses of women are the principal earning members of the family and bear the burden of care for them, this research was aimed to evaluate psychological distress among spouses of women undergoing anaesthesia for CS and also to identify the coping strategies used by the participants.

METHODS

This was a prospective, interview schedule-based study carried out between January 2018 and August 2018 at the University of Port Harcourt Teaching Hospital, Port Harcourt; approval from the the hospital's Ethics and Research Board was obtained. Consecutively recruited, 91 spouses of women undergoing CS who gave consent and have undergone pre-anaesthetic counselling were given a self-administered study questionnaire consisting of sociodemographic questionnaire, the General Health Questionnaire (GHQ 12) and the Brief Cope Inventory (COPE) under a strict patient confidentiality. A score of 3 and above on the GHQ was considered as psychological distress. Scores on the subscales of the COPE were summed up to for each individual. The data were analysed using Statistical Package for the Social Sciences software version 20 (IBM Corp., Armonk, NY, USA). Proportions or categorical parameters were analysed by the Chi-square test. Continuous variables were compared by the Student's *t*-test. *P* < 0.05 was considered statistically significant.

RESULTS

All the individuals participated throughout the study. Table 1 shows the distribution of the sociodemographic data of the participants. While the mean age of the sample population was 38.62 ± 6.88 years, most of the participants (51.6%)

Table 1: Distribution of sociodemographic variables among the study participants

Variables (n=91)	Frequency, n (%)
Age category	
20-29	9 (9.9)
30-39	47 (51.6)
40-49	28 (30.8)
50-59	7 (7.7)
Educational status	
None	3 (3.3)
Primary	4 (4.4)
Secondary	37 (40.7)
Tertiary	47 (51.6)
Employment status	
Employed	62 (68.1)
Unemployed	29 (31.9)
Income	
<10,000	4 (4.4)
10,000-30,000	8 (8.8)
30,000-50,000	15 (16.5)
50,000-100,000	21 (23.1)
>100,000	43 (47.3)
Previous birth experience	
Without previous experience	20 (22.0)
With previous experience	71 (78.0)

were within the age range of 30–39 years and attained a tertiary level of education.

Sixty-two (68.1%) participants were employed, while 29 (31.9%) of them were unemployed. About 47.3% of the participants had an annual income of more than N100,000.00, while 4.4% of them had an income lower than N10,000. The table also showed that 78% of the participants had previous birth experience and 20 (22%) had no previous experience.

Table 2 shows the relationship between the sociodemographic variables and psychological morbidity. Psychological distress was significantly more common among those who were younger (20–39 years' age range – 100% and 30–39 years' age range – 57.4%, while all the nine participants within the age range of 20–29 years had psychological distress, and those within the age range of 50–59 years were least impacted psychologically (*P* = 0.002). More participants with tertiary education were less impacted. The relationship between educational status and psychological distress was not statistically significant (*P* = 0.262). However, unemployment status impacted significantly on psychological distress (*P* = 0.022). The table also demonstrates the strong relationship between previous birth experience and psychological distress (*P* = 0.002). Both types of anaesthesia administered and urgency of surgery did not influence the psychological morbidity of the participants (*P* = 0.087 and *P* = 0.196, respectively). Most of the surgeries (92.86%) were conducted under spinal anaesthesia, while 3.57% were conducted under epidural anaesthesia.

Table 2: Relationship between sociodemographic variables and psychological morbidity

Variables (n=91)	With psychological distress, n (%)	Without psychological distress, n (%)	Total, n (%)
Age category			
20-29	9 (100.0)	0 (0.0)	9 (100.0)
30-39	27 (57.4)	20 (42.6)	47 (100.0)
40-49	13 (46.4)	15 (53.6)	28 (100.0)
50-59	1 (14.3)	6 (85.7)	7 (100.0)
Fisher's exact test; <i>P</i>	13.576; 0.002*		
Educational status			
Tertiary	22 (46.8)	25 (53.2)	47 (100.0)
Secondary	24 (64.9)	13 (35.1)	37 (100.0)
Primary	3 (75.0)	1 (25.0)	4 (100.0)
None	1 (33.3)	2 (66.7)	3 (100.0)
Fisher's exact test; <i>P</i>	3.930; 0.262		
Employment status			
Unemployed	21 (72.4)	8 (27.6)	29 (100.0)
Employed	29 (46.8)	33 (53.2)	62 (100.0)
χ^2 ; <i>P</i>	5.247; 0.022*		
Income			
<10,000	1 (25.0)	3 (75.0)	4 (100.0)
10,000-30,000	5 (62.5)	3 (37.5)	8 (100.0)
>30,000-50,000	11 (73.3)	4 (26.7)	15 (100.0)
>50,000-100,000	14 (66.7)	7 (33.3)	21 (100.0)
>100,000	19 (44.2)	24 (55.8)	43 (100.0)
Fisher's exact test; <i>P</i>	6.662; 0.142		
Previous birth experience			
Without previous experience	17 (85.0)	3 (15.0)	20 (100.0)
With previous experience	33 (46.5)	38 (53.5)	71 (100.0)
χ^2 ; <i>P</i>	9.353; 0.002*		
Type of anaesthesia (n=84)			
Spinal	46 (59.0)	32 (41.0)	78 (100.0)
Epidural	1 (33.3)	2 (66.7)	3 (100.0)
Subarachnoid	0 (0.0)	3 (100.0)	3 (100.0)
Fisher's exact test; <i>P</i>	4.364; 0.087		
Urgency of surgery (n=84)			
Elective	20 (48.8)	21 (51.2)	41 (100)
Emergency	27 (62.8)	16 (37.2)	43 (100)
χ^2 ; <i>P</i>	1.672; 0.196		

*Statistically significant

Table 3 shows the logistic regression analysis for the predictors of psychological distress of the spouses. A significantly higher proportion (72.4%) of the participants who were unemployed had psychological distress in comparison to those who were employed. In addition, those who had no previous experience of birth had a significantly higher rate (85.0%) of psychological distress in comparison to those who had previous experience. The significant predictors of psychological distress were the employment status ($P = 0.018$) and previous birth experience ($P = 0.009$).

Table 4 shows the comparison of coping strategies among participants with or without psychological distress. The significant coping strategies were active coping ($P = 0.004$), substance abuse ($P = 0.033$), positive reframing ($P = 0.001$), planning ($P = 0.001$) and self-blame ($P = 0.042$).

DISCUSSION

The objective of this study was to determine the level of psychological distress of spouses whose wives had

interventional delivery under anaesthesia. It shows that spouses whose partners had operative delivery under anaesthesia sustained a significant psychological distress (See Figure 1 below) and also developed some coping strategies to reduce the impact of this morbidity.

While childbirth is a normal physiological event with the potential to evoke a range of positive and negative experiences, its influence on the spouses is yet to be fully elucidated. One study showed that spouses whose wives were pregnant did not show any psychological distress during pregnancy;⁶ however, this index study demonstrated a significant psychological distress amongst spouses whose wives were undergoing operative delivery. We found that psychosocial factors were associated with the experiences of CS, both during and following the event. Mother's negative expectations, anxiety sensitivity and fear responses were found to be important, as were spouses' fear responses. Severe morbidity (such as pain during and after surgery, blood loss and infection) or mortality is an associated risk with interventional delivery.

Table 3: Logistic regression analysis for the predictors of psychological distress

Independent variables	Coefficient (B)	OR	95% CI		P
			Lower	Upper	
Age (years)					
<40	0.907	2.478	0.960	6.386	0.061
40 and above ^R		1			
Employment status					
Unemployed	1.257	3.514	1.238	9.977	0.018*
Employed ^R		1			
Previous birth experience					
Without previous birth experience	1.835	6.267	1.585	24.781	0.009*
With previous birth experience ^R		1			

*Statistically significant, ^RReference category. CI: Confidence interval, OR: Odds ratio

Table 4: Comparison of coping strategies among participants with/without psychological distress

Coping strategy	Mean±SD		t	P
	With psychological distress	Without psychological distress		
Self-distraction	2.92±1.41	2.65±1.15	0.953	0.343
Active coping	7.76±1.15	6.87±1.79	2.981	0.004*
Denial	2.44±1.34	2.34±1.11	0.376	0.708
Substance use	3.02±1.71	2.31±1.31	2.162	0.033*
Use of emotional support	5.86±2.61	5.56±2.59	0.546	0.587
Use of instrumental support	6.24±2.11	5.37±2.22	1.922	0.058
Behavioural disengagement	2.00±0.00	2.10±0.50	-1.413	0.161
Venting	2.36±0.90	2.28±0.78	0.472	0.638
Positive reframing	7.20±1.61	5.79±2.32	1.361	0.001*
Planning	7.14±2.00	5.42±2.61	3.571	0.001*
Humour	2.29±0.74	2.34±0.76	-0.312	0.756
Acceptance	7.52±1.37	6.90±2.04	1.702	0.092
Religion	5.72±2.67	5.61±2.41	0.205	0.838
Self-blame	2.49±1.41	2.02±0.16	2.071	0.042*

SD: Standard deviation, *Statistically significant

Fear and anxiety is one of the important issues for both patients and their relations. In non-life-threatening procedures, the main cause of pre-operative anxiety is more due to anaesthesia rather than surgery itself.⁷ Fear of anaesthesia outcome during surgery is one important factor that could impact negatively on either the parturient or the spouse. In one study, it was found that fear of anaesthesia is very common with women undergoing surgery.⁸ Therefore, the feelings of the women could indirectly and negatively impact on their spouses.

The economic implications of a CS are exceedingly substantial. The cost of care, especially when not covered by any health insurance scheme, is routinely borne by the spouse. This financial burden could be a source of immense psychological distress to the spouse who assumes the social responsibility for the healthcare needs of his wife. Men are expected to undertake the cost of care of their wives.^{9,10} Most times, the families are not adequately prepared to undertake the financial burden of and healthcare needs associated with childbirth. This common if there is an urgency in the childbirth. In extremely poor settings such as ours, it is difficult to prepare financially for the birthing process as most healthcare needs are borne by out-of-pocket expenses. It is well known that out-of-pocket payments

can make households and individuals incur catastrophic healthcare expenditure and hence, exacerbating the level of financial indebtedness. Such source of healthcare financing negatively affects people’s living standards and welfare and, consequently, become a source of intense psychological distress.¹¹⁻¹³

Being unemployed *ab initio* or losing a job can be stressful. It has been demonstrated that there is also considerable evidence that unemployment is associated with a decline in psychological well-being and the development of mental health problems such as depression, anxiety, substance abuse, antisocial behaviour and unhealthy behaviours.^{14,15} In our study, the younger spouses (age range 20–29 years) were all found to be psychologically distressed, and a significant number of them were unemployed. Unemployment could negatively influence the ability to provide and care for both the mother and child. In our setting, the spouse, relations or friends bear the financial responsibilities related to anaesthesia and surgery. Occasionally, the newborn is admitted and observed or treated in the special care baby unit. This further increases the financial burden on the spouse. It has been demonstrated that job loss is associated with the concerns of loss of socioeconomic status and declined mental health.¹⁶ The psychological impact of the

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inability to provide and care for both the mother and child could probably explain the coping strategies demonstrated by the spouses in this study.

This index study also showed that the spouses with previous birthing experiences were less psychologically distressed than the first-timers. The study did not compare those with previous experience and employment status. However, it has been demonstrated that fathers often express being ill prepared for the experience of childbirth, resulting in feelings of stress, anxiety, insecurity and inadequacy.¹⁷ This has been found to be so because partners are not well included in birth preparation classes, which could be compounded by an unprepared financial burden. Fathers with previous experiences of childbirth have been described as not to be in need of the same amount of information during pregnancy as first-time fathers.¹⁸

A more confounding variable to assess the extent of the psychological distress experienced by spouses would have been to evaluate the cortisol levels. Although cortisol levels were not investigated in our study, it is well known that high cortisol levels are generally associated with high stress levels.¹⁹ The extreme psychological distress experienced by these spouses could ultimately lead to paternal postpartum depression. Remarkably, there is not yet one single official set of diagnostic criteria for paternal postpartum depression that has been advanced. This extreme psychological state could be compounded by the inability to provide and care for the mother and child or inexperience with the birthing process.

One Australian study showed that the inability of the spouse's need to be met during the antenatal class and the challenges of out-of-pocket expenditure to provide for the wife and child could incur a major psychological challenge.²⁰ This transitional period could also impact on his fathering abilities and relationship disequilibrium.

The transition into becoming a father, especially for the first-timers, has been strongly described as a critical and significant event and a turning point that requires some coping strategies. The transition process requires the achievement of some major milestones such as provision for the wife and child and the introduction of a new life into the family.²¹ Coping skills learnt earlier in life are frequently mobilised to aid the transition during challenging situations.

In our study, various coping strategies were observed. While some of the spouses exhibited positive coping

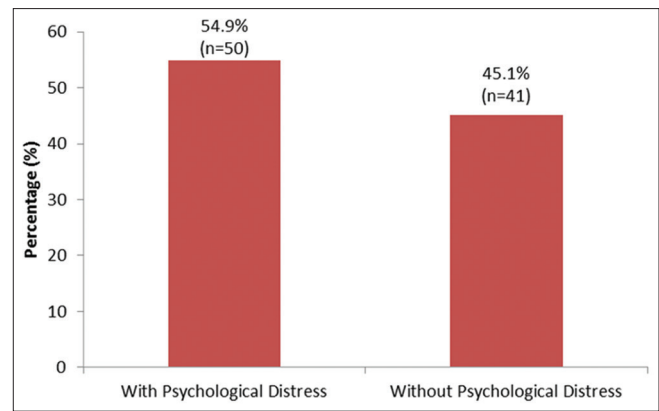


Figure 1: Showing the proportion of spouses with and without psychological distress

strategies such as planning, active coping and positive reframing, others responded negatively to the birthing process. Even though positive reframing does not change a situation, it can certainly reduce damage and put things into a healthier perspective. Positive reframing along with humour could reduce the stress and make a significant difference in a difficult situation. A significant number of the participants in our study used active coping mechanism to overcome the psychological challenges of the birthing process ($P = 0.004$). The term active coping in our study would refer to a coping style that is characterised by solving problems, seeking information, seeking social support, seeking professional help, changing environments, planning activities and reframing the meanings of problems. This form of coping strategy was more common amongst the employed and those with previous birth experience.

However, the negative responses such as self-blame and substance abuse observed in our study highlight the need for proper involvement of the spouses in antenatal classes in preparation for the birthing process of their wives. Feelings of inadequacy, hopelessness and self-blaming emotions are closely associated with depressed mood and are associated with high distress. A significant number of the young spouses were ill prepared for the birthing process and resorted to self-blame ($P = 0.042$). This could probably be due to their inability to offer adequate financial support to the mother and child.

A limitation in this study was the number of participants recruited. A better outcome of the study would have been possible if a larger population sample would have been studied. The emotional state of the participants could have as well impacted negatively on the interview schedule administered to them. However, the study is amenable to further evaluation with a larger population sample.

CONCLUSION

Pregnancy and childbirth could be a stressful period to both spouse and partner. The enormity of the impact of psychological distress of a spouse whose wife is undergoing an interventional delivery was frequently underscored. This study has shown a significant impact of the distress on the spouse. This was observed to be more on younger spouses who were inexperienced and also lacked the capacity to bear the associated financial burden. The study also showed a variety of coping strategies used by the spouses to reduce the impact of the distress on them. It is, therefore, recommended that spouses be adequately prepared to undergo this transition period.

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Conflicts of interest

There are no conflicts of interest.

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