



Determining the Psychological Well-Being of the Mothers of Neonates Admitted at Tertiary Hospitals in Ogun State Using Ryff's Scales of Psychological Well-Being

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Abstract

Women are often faced with different difficulties while trying to cope with the roles of having to nurse a neonate when admitted into the neonatal intensive care unit (NICU) at birth or shortly after birth. This study determined the psychological well-being of mothers whose neonates were admitted.

A descriptive survey research design was utilized. There were 52 mothers recruited for the study using total enumeration method in the two study centres. Ryff's standardized scale of psychological well-being was used in collecting data from the respondents. The Statistical Package for the Social Sciences (SPSS) version 21 was used. Descriptive statistics were used to analyze demographic data and the research questions while inferential statistics of chi-square and correlations were used to test the hypotheses at the 0.05 level of significance.

The psychological well-being of the respondents showed that 65.4% had low psychological well-being in environmental mastery, 80.8% of the respondents were low in acceptance of the situation while 26.9% were low in positive relations. About two-fifth (40.4%) had low psychological well-being on the overall. Mothers' parity ($p = 0.490$) was not significantly associated with the psychological well-being while educational status was significantly associated with the level of psychological well-being of the mothers ($p=0.013$).

The study concluded that many mothers experience low psychological well-being when their neonates are admitted into the NICU. Supportive therapy would go a long way in helping these mothers.

Keywords: *Determinants, Mothers, Neonatal Intensive Care Unit, Neonates, Psychological well-being.*

Introduction

Many women experience physical and emotional challenges during pregnancy, delivery and postpartum. Having the newborn admitted to the hospital during the early days

of life adds extra stress to this challenging phase of motherhood. The unexpected hospitalization of a neonate is far from what the mother may have anticipated; the shock of a rapid chain of events taking place, a

feeling of emptiness when the baby is placed in the intensive care unit, the feeling of powerlessness when facing the risk of the infant's possible death and the invasive treatments are enough to put any mother in serious psychological distress. These mothers worry about the viability and future of their neonates. The reactions of mothers of preterm neonates could have serious repercussions on the development of the neonate due to complex and atypical interactions between the mother and the child and will also have an impact on the psychological well-being of the mothers (Ionio, Colombo, Brazzoduro, Mascheroni, Confalonieri, Castoldi, & Lista, 2016).

The relationship between mothers and their babies is of significant value to the psychological well-being of the mothers. Determining the psychological well-being of the mothers will help in developing positive mother-child relationship. According to Busse, Stromgren, Thorngate and Thomas (2013), pregnancy and the birth of a baby change the whole family context and create unique anxieties in the case of a preterm newborn. Feelings of incompetence, frustration, anger, guilt and anguish may be present when mothers do not have healthy babies. Mothers of hospitalized neonates have a greater risk of psychological distress. These mothers experience psychological trauma more than other mothers. Research has shown that the ability to understand the psychological well-being of these mothers will help in managing the mental status of such mothers which will in turn help in developing special parenting styles for managing the neonates. The psychological well-being cannot be clearly understood until it is assessed alongside with the determinants (Trudel-Fitzgerald, Millstein, von Hippel, Howe, Tomasso, Wagner & VanderWeele, 2019).

According to Ryff (2014), psychological well-being has six components which are environmental mastery, acceptance of the situation, positive relation with others, autonomy, personal growth and purpose in

life. However, only environmental mastery, acceptance of the situation and positive relation with others were assessed in this study because these components of the mothers' psychological well-being are often affected when their neonates are admitted into the NICU (Heidari, Hasanpour & Fooladi, 2017; Niranjana, Nijaguna, Jagadish & Naveen, 2015). According to Keejeorg (2012); Chourasia, et al., (2013), demographic status/maternal characteristics (like employment status, pregnancy complications, education, race/ethnicity and parity) are considered to affect the psychological well-being. When neonates are admitted, the mothers' psychological well-being is affected mostly in the areas of environmental mastery, acceptance of the situation and relationship with others (Ashwani, Rekha & Kumar, 2017; Niranjana, Nijaguna, Jagadish, & Naveen, 2015; Stacey, Osborn & Salkovskis 2015; Binu, et.al., 2014;). Environmental mastery involves a sense of mastery and competence in managing the environment, making effective use of the surrounding opportunities and creating context suitable to personal needs and values. The inability to manage everyday affairs, unable to improve on the surrounding context and lack of sense over the external world depicts poor mastery of the environment (Ashwani, Rekha & Kumar, 2017). Acceptance of the situation is the ability to possess a positive attitude toward self, acknowledging and accepting multiple aspects of one's self including good and bad qualities but in a case whereby the individual feels dissatisfied and disappointed with self and have a problem about certain personal qualities will mean that the individual does not accept self or the situation (Trombini, et al., 2008). Positive relationships with others is when individuals have a warm satisfying, intimate and trusting relationship with others, concerned about others' welfare and understand give and take of human relationships. When the individual has few close trusting relationships, it makes it difficult for the individual to be stable psychologically and poor interpersonal

relationship with others will set in (Heidari, Hasanpour & Fooladi, 2017).

In this connection, Cleveland (2008), posited that the hospitalization of the neonate is a crisis for the mother as she must cope with many issues that may arise unexpectedly since their transition to motherhood is unexpectedly interrupted and the worries about the survival and future of the child take over. The degree of psychological distress of the mother may vary in relation to the time of delivery. Some mothers of admitted neonates continue to show symptoms of psychological distress. These mothers often struggle with the uncertainty associated with their neonates' short and longer-term prognoses and the highly technical and somewhat 'alien' environment in the neonatal unit (Sih, Bimerew & Modeste, 2019).

Olusanya, Osibanjo, Mabogunje, Slusher, and Olowe (2016) described hospitalization of neonates as one of the most traumatic episodes of parenthood, especially for the mothers of the neonates. When the neonate is too ill and on a respirator or other supportive devices, mothers find it difficult to maintain skin-to-skin contact and some hospitals encourage them to take precautions when visiting to minimize the risk of spreading infections to these babies. Olusanya, Osibanjo, Mabogunje, Slusher, and Olowe (2016) further stated that some mothers enjoy family and partner's support during the infant's hospitalization while others have to walk the journey alone. Those that enjoy the family and partner's support tend to have better psychological well-being in the area of positive relationships with others. Some mothers might be rejected by their partners due to cultural beliefs, leading to frustration and isolation. This then shows the importance of positive relationships with others as a determinant of psychological well-being (Ntswane & Van, 2010).

Lee (2009) observed that mothers who give birth and have the neonates admitted often experience a certain degree of sorrow, anxiety,

anger and depression which directly influence the psychological well-being of the mothers. This psychological well-being and the components when assessed depicts the state of emotion of the mothers. Though there have been advances in science and technology which improves the survival rate of the neonates less importance has been placed on the psychological well-being of these mothers who have their neonates admitted in the NICU. Based on the foregoing, this study determined the psychological well-being in the areas of environmental mastery, acceptance of the situation, and positive relations with others of mothers who have their neonates admitted to two tertiary hospitals (Babcock University Teaching Hospital { BUTH} and Olabisi Onabanjo University Teaching Hospital {OOUTH}) in Ogun State.

Objective of the Study

The main objective of this study was to determine the psychological well-being of mothers whose neonates were admitted to NICU using Ryff's scales of psychological well-being. The specific objectives are to:

1. identify how environmental mastery influence the psychological well-being of the mothers;
2. determine how acceptance of the situation of mothers of admitted neonates influence the psychological well-being;
3. describe how mothers' positive relations with others influence the psychological well-being

Hypotheses

H₀₁: There is no significant association between the parity of the mothers and the psychological well-being of mothers.

H₀₂: There is no significant association between the educational status of the mothers and their psychological well-being.

Methodology

The study employed a descriptive survey design to determine the psychological well-being of mothers of neonates admitted to neonatal intensive care units of two tertiary

hospitals in Ogun State. Total enumeration method was used in recruiting respondents for this study by recruiting all the respondents who were ready to engage in the study since the average number of patients on monthly basis is usually low. During the study period, only 52 mothers were seen over the four weeks of the data collection process. 13 mothers from BUTH and 39 mothers from OOUTH. Ryff's Scales of Psychological Well-being (PWB) was adopted for the collection of data from the respondents. Approvals were taken at the Units (NICU) where the data collection took place with ethical approval from the Hospital management.

The collected data were coded and analyzed quantitatively using a computer software version 21 of the Statistical Package for the Social Sciences (SPSS). The level of psychological well-being was rated as shown: Low psychological well-being was scored as 0-8 ($\leq 25\%$ score)

Normal psychological well-being was scored as 9-16 ($>25\%$ but $<75\%$ scores)

High psychological well-being was scored as: 17-25 ($\geq 75\%$ score)

Validity/Reliability of the Instrument

The instrument for data collection was adapted to Ryff's Scale of Psychological Well-being. Face and contents validity was ensured by the researchers and other experts in the field of health sciences, research and statistics. Ryff's Scales of Psychological well-being is a standardized instrument with internal consistency (Alpha Coefficient) of 0.88. The researcher also tested the reliability of the adapted instrument at Federal Medical Centre, Abeokuta which is another tertiary hospital in Ogun state by recruiting ten mothers whose neonates were admitted into the NICU of that hospital and the Cronbach's alpha coefficient was found to be 0.85, so the instrument was considered reliable.

Findings**Table 1: Socio-Demographic Characteristics (N = 52)**

Variable	Frequency (f)	Percentage (%)
Age group (yrs)		
19 – 24	7	13.5
25 – 30	19	36.5
31 – 36	14	26.9
37 and above	12	23.1
Mean \pmSD = 30.96 \pm 6.17		
Parity		
Para1	13	25.0
Para 2	17	32.7
Para 3	19	36.5
Para 4	1	1.9
Above 4	2	3.8
Family average monthly income (thousand)		
Below 100	29	55.8
100 – 200	16	30.8
201 – 300	4	7.7
301 – 400	3	5.8
Mother's occupation		
Civil servant	14	26.9
Self-employed	32	61.5
Artisan	6	11.5
Mother's highest level of education		
No formal	2	3.8
Primary	6	11.5
Secondary	18	34.6
Tertiary	26	50.0

Table 1 shows the socio-demographic characteristics of the respondents. A total of 52 mothers were recruited for the study. About one-third of the mothers 19(36.5%) were between 25-30years, majority of the respondents 19 (36.5%) were para 3. Majority

44(84.6%) of the respondents have not had any of their children admitted before into the NICU. Half of the respondents 26 (50%) had tertiary education and most (44.2%) of the neonates have been admitted for about 4-6days.

Table 2: Scales of Psychological Well-Being (N = 52)

Category	Score	Frequency (%)	Remark
Environmental Mastery	0 – 3 ($\leq 25.0\%$ score)	34 (65.4)	Low
	4 – 6 ($> 25.0\%$ score)	16 (30.8)	Normal
	7 – 9 ($\geq 75.0\%$ score)	2 (3.8)	High
Acceptance of the situation	0 – 2 ($\leq 25.0\%$ score)	42 (80.8)	Low
	3 – 4 ($> 25.0\%$ score)	8 (15.4)	Normal
	5 – 7 ($\geq 75.0\%$ score)	2 (3.8)	High
Positive relations with others	0 – 3 ($\leq 25.0\%$ score)	14 (26.9)	Low
	4 – 6 ($> 25.0\%$ score)	24 (46.2)	Normal
	7 – 9 ($\geq 75.0\%$ score)	14 (26.9)	High
Overall Psychological well-being	0 – 8 ($\leq 25.0\%$ score)	21 (40.4)	Low
	9 – 16 ($> 25.0\%$ score)	31 (59.6)	Normal
	17 – 25 ($\geq 75.0\%$ score)	0 (0.0)	High

Table 2 shows the different components of the psychological well-being and the overall psychological well-being. On the environmental mastery of the mothers, 34 (65.4%) of the mothers had low psychological well-being while 42 (80.8%) of the respondents were low in acceptance of the

situation and 14 (26.9%) of the respondents were low in positive relations with others. On the overall assessment, 21 (40.4%) of the respondents had low psychological well-being.

Hypothesis One: There is no significant association between the parity of the mothers and the psychological well-being of mothers.

Table 3: Association Between Mother’s Parity and Psychological Well-Being

Variables	Psychological Well-being		X ² - Value	p-value
	Low n(%)	Normal n(%)		
Parity				
One	6 (28.6)	7 (22.6)	3.64	0.490
Two	6 (28.6)	11 (35.5)		
Three	7 (33.3)	12 (38.7)		
Four	0 (0.0)	1 (3.2)		
Above four	2 (9.5)	0 (0.0)		

Table 3 reveals the result of chi-square that the mother’s parity was not significantly ($p = 0.490$) associated with their level of psychological well-being. Hence, the null hypothesis was accepted.

Hypothesis Two: There is no significant association between the educational status of the mothers and their psychological well-being.

Variables	Psychological Well-being		X ² - Value	p-value
	Low n (%)	Normal n (%)		
Educational Status				
Non formal	1 (4.8)	1 (3.2)	9.96	0.013
Primary	2 (9.5)	4 (12.9)		
Secondary	11 (52.4)	7 (22.6)		
Tertiary	7 (33.3)	19 (61.3)		

Table 4: Association Between Mother's Educational Status and Psychological Well-Being

Table 4 reveals that the mother's educational status was significantly ($p = 0.013$) associated with the level of psychological well-being of the respondents. Hence, the null hypothesis was rejected.

Discussion of Findings

The findings from this study show that most mothers (36.5%) are between 25-30 years with most of them being Para 3 and most (55.8%) having an average monthly family income less than # 100,000. This may not be unconnected to the fact that majority (61.5%) of the respondents were self-employed who may not be sure of their monthly income but just estimated their income which might be right or otherwise. Half of the mothers have a tertiary education. Neonates of most of the mothers have been admitted for about 4-6 days. Keejeorg (2012) opined that demographic status/maternal characteristics (like employment status, pregnancy complications, education, race/ethnicity and parity) are considered as determinants of psychological well-being.

The socio-demographic characteristics of the respondents in this study might also have influenced the findings thereby serving as the determinants of the psychological well-being.

To determine how environmental mastery influence the psychological well-being of the mothers. This study found out that the psychological well-being of mothers whose neonates were admitted into the NICU during the study period was negatively affected by the admission of the neonates on the area of environmental mastery. This might be

connected with the new and unfamiliar environment where the mothers need to take care of the newborn child. This was in line with the study of Binu, et al. (2014), who opined that among mothers whose neonates are hospitalized in NICU, high levels of anxiety depression and hostility was shown and same also revealed problems of psychosocial adjustment of the mothers.

Their findings showed that the state anxiety level was found to be 65% in the mothers whose neonates were hospitalized. This inline with the study by Health information for Western Australian (2018) also support the findings from this study that mothers are often not psychologically stable during the admission of their neonates: 8 to 11% of women experience depression during admission of their neonates while 13 per cent of women will go through postnatal depression. This finding was corroborated by Ashwani, Rekha and Kumar (2017) that NICU environment has the potential to exacerbate stress for mothers of neonates admitted to the NICU therefore directly affecting the environmental mastery of the mothers.

This is in line with the study conducted by Niranjana, Nijaguna, Jagadish, and Naveen (2015) affirmed that lack of maternal roles, such as not being able to protect the neonate, and separation and the appearance and behaviour of the sick neonate cause significant distress in mothers whose sick neonate is hospitalized in NICU. Findings from Niranjana, Nijaguna, Jagadish, and Naveen (2015) shows that the sights and

sounds in the NICU and of all the technical equipment used on the neonate which constitutes the environment that affect the psychological well-being was extremely stressful to 90% of the mothers which is in contrast to the findings from this study which shows that 65.4% of the mothers were affected psychologically in the area of environmental mastery. However, Niranjan, Nijaguna, Jagadish, and Naveen (2015) also placed much emphasis on the environment as a major factor that affects the psychological well-being. Heidari, Hasanpour and Fooladi (2017) in a qualitative study on stress management among parents of infants admitted to the NICU found out that mothers think that they have lost control because of being unfamiliar with the NICU environment thereby constituting to low psychological well-being among the mothers.

This was supported by White (2011), in his study in terms of environmental stressors showed that "the sudden sound of the monitor buzzer and special facilities and equipment of the unit", respectively, were the most experienced stressor agents by mothers with high-risk neonates in NICU. The study indicated that maternal stress for NICU sights and sounds is significantly influenced.

To determine how acceptance of the situation of mothers of admitted neonates influence the psychological well-being

This study found out that the psychological well-being of mothers whose neonates were admitted into the NICU during the study period was negatively affected by the admission of the neonates on the area of acceptance of the situation. Findings from the study show that 80.8% was low. This study was in line with Trombini, Surcinelli, Piccioni, Alessandrini, and Faldella (2008) who reported that neonatal intensive care unit's atmosphere could increase the mother's stress level and leave emotional scars on them while trying to adapt to the situation. This was also supported by Barr (2015) who generated some ways by which the mothers adopt in coping with the admission of their neonates, by

focusing on positive thinking and imagination, mothers' words in this study tried to see the existing situation positively by making changes in their psychological characteristics. Also, the study by Lindberg and Ohrling (2008), opined that mothers feel like their ability to manage and conform to these conditions relied on appropriate emotional support from family and medical team in order to receive the required information which might be the reason 80.8% of the respondents' has low psychological well-being in acceptance of the situation.

The study conducted by Swee, Khatijah and Mahmud (2018) in Malaysia on stress and anxiety experienced by mothers who have their neonates admitted into the NICU that found out that 56.5% of mothers had high levels of stress, therefore, constituting to low psychological well-being among the mothers.

To describe how mothers' positive relations with others influence the psychological well-being

This study found out that the psychological well-being of mothers whose neonates were admitted into the NICU during the study period was negatively affected by the admission of the neonates on the area of positive relationships with others. This was in line with the study conducted by Cleveland (2008), which revealed that mothers had experienced uncertainty in relation to neonate care, inadequate services from community health nurses to pursue home care and their need for follow-up information and how to manage these neonates' condition. The study conducted by White (2011) also opined that few mothers reported stress in the area of staff and communication and maturity of the baby were significantly associated with higher parental stress. In the study, staff communication contributed to the mothers' psychological well-being.

On the contrary, the study conducted by Heidari, Hasanpour and Fooladi (2017) found out that mothers think they have lost control

because of unfamiliar environment and that the emotional distress in different areas including seeking information, finding hope, maintaining calmness and communication with others has contributed to their psychological well-being. Also, in the study conducted by Chourasia, Surianarayanan, Adhisivam, Vishnu and Bhat (2013), they found out that assurance from the staff will communicate to mothers if the neonate's condition deteriorates.

Heidari, Hasanpour and Fooladi (2017) further found that the mothers in the study wanted to seek for help and sympathy from others because of the low psychological well-being experienced in the area of positive relationships with others as also experienced by the respondents in this study which shows low positive relation with others by 26.9% of the respondents. This study is also supported by Stacey, Osborn and Salkovskis (2015), who conducted a study assessing factors that helped mothers cope with the NICU and found that the physical environment of the NICU played a critical role in maternal ease and satisfaction.

Hypotheses Testing

H₀₁: There is no significant association between the parity of the mothers and the psychological well-being of mothers

Findings from this study show that parity was not significantly ($p = 0.490$) associated with the level of psychological well-being of the mothers. This finding agreed with the study conducted by Yurdakul, Akman, Kuşçu, Karabekiroglu, Yaylali, Demir, and Özek, (2009) in assessing maternal psychological problems associated with NICU determinants of mothers who have their neonates admitted to NICU who found out that psychological well-being of mothers was not linked to educational status and parity. The findings from this study also agree with the findings from Marta, Antonella, Irene, Erika, Melissa, Francesca and Chiara (2017) in a study on psychological well-being and depression from pregnancy to postpartum among primiparous and multiparous women that psychological

state did not differ between primiparous and multiparous women.

Also, Singh, Kaur and Singh (2015) in a study on the relationship of parity and health-related quality of life among women also observed non-significant correlation between parity and psychological well-being. The findings from this study are also in line with the findings of Vilska, Unkila-Kallio, Punamaki, Poikkeus, Repokari, Sinkkonen et al (2009), who opined in their study that parity of the mother does not have anything to do with her psychological well-being but reported high levels of depression and anxiety. Also, in a study conducted by Adejumo (2009) on the influence of social support, work overload, and parity on pregnant career women's psychological well-being, it was found that there was no significant effect of parity on the psychological well-being of the women.

H₀₂: There is no significant association between the educational status of the mothers and the psychological well-being

Table 5 reveals that the mother's educational status was significantly ($p = 0.013$) associated with the level of psychological well-being of the mothers. It may be deduced that when the mothers are educated, it helps them in coping better with the admission of their neonates. It may be concluded that the educational status is one of the determinants of the psychological well-being of mothers whose neonates are admitted into the NICU. This is supported by a study carried out by Chourasia, et al., (2013) who affirmed that less educated and uneducated mothers were found to have higher stress leading to low psychological well-being among them.

Conclusion and Recommendation

Close to half (40.4) of the respondents had low psychological well-being and majority (80.8%) were affected in the acceptance of the situation component. The study recommends that the psychological well-being of the mothers whose neonates are admitted into the NICU should be paid attention to when caring for the neonates.

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