



THE INFLUENCE OF FERTILITY INTENTIONS ON FEAR OF CHILDBIRTH IN UNDERGRADUATE STUDENTS

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Abstract

The study examined the influence of fertility intentions on fear of childbirth among nulligravid students in selected universities. Adopting survey methodology, 366 participants including 145 male and 221 females (mean age = 20.67, Range 17-24 years) responded to Childbirth Fear Prior to Pregnancy (CFPP), and the Swedish Fertility Awareness Scale. Three research questions were examined. There was high fertility intentions in the sample. Findings from the independent t-Test revealed that fertility intention did not influence fear of childbirth $t(364) = .52, p > .05$. However, gender showed a significant influence on fear of childbirth with females having higher fear of childbirth than male $t(364) = -2.12, p < .05$. Based on these results, it is recommended that comprehensive childbirth education for nulligravid university students is essential. Providing accurate information about the childbirth process, potential pain management techniques, and addressing common fears related to childbirth can help alleviate anxiety and increase confidence in these students.

Keywords: *Fertility intention, fear of childbirth, nulligravida, socio-demographics*

Introduction

Pregnancy and childbirth are considered normal physiological life events and often desired by women in early adulthood. However, it is often associated with the experience anxiety at the physical and emotional consequences of childbirth (Serçekuş et al., 2020). Fear of childbirth (FOC) can affect men and women and vary from negligible concerns to intense emotional and physical responses, such as post-traumatic stress disorder (Ryding et al., 1998). Previous studies have identified different predictors of FOC including personality traits (Uludağ et al., 2022), parity (Khajehei, et al., 2023) and sociodemographic characteristics (Roosevelt & Low, 2021).

FOC has been linked to concerns about coping with labor pain, obstetric complications, and maternal/infant health risks (Jokic-Bekic et al., 2014; Ryding et al 1998). Individuals with high fear of birth may interpret birth as frightening and life threatening (Khajehei, et al., 2023). Consequently, fear of childbirth can affect fertility intentions or lead to an aversion to childbirth.

A large proportion of FOC and fertility intention studies have mostly been carried out with women in their childbearing years. There is however evidence that attitudes towards fertility and childbirth are formed long before childbirth (Rublein & Muschalla, 2022). This study takes a novel approach by measuring FOC and fertility intentions prior to childbirth.

Fertility intentions refer to the desire to have a child (Lampic et al., 2006) prior to the first experience of pregnancy. Despite the complex association between fertility intentions and actual fertility, previous studies have demonstrated that fertility intentions have been regarded as a reliable predictor of actual fertility behavior (Zeng et al., 2023; Machiyama et al., 2019). Considering the significantly high fertility rate in Nigeria (NPC-ICF, 2019), timely research on fertility intentions on the next child bearing generation is significant for resource planning and development in a high-fertility country like Nigeria.

Furthermore, previous studies have mainly examined FOC in females. Qualitative studies examining birth narratives of male partners have described emotionally challenging experiences while supporting their partners during childbirth and in the postpartum period (Eriksson, 2010). A literature review of paternal fears of childbirth (Hanson et al., 2009) revealed that the most common fear reported by fathers was fear that their partner would have to endure intolerable pain

and suffering and harm to the mother or newborn baby. Since partners' childbirth fear and mode of delivery preferences have been linked to birth outcomes (Hildingsson, 2014), including males in studies examining FOC and fertility intentions is vital to a wholistic understanding of the subject matter.

Since FOC includes a range of physical and emotional obstacles for the birthing woman to overcome (Slade et al., 2019; Sheen & Slade, 2018), it is envisaged that it could lead to decreased fertility intention. The current study therefore proposes that FOC level will significantly influence fertility intentions prior to childbirth.

Consequently, the aim of the current study was twofold: (1) to examine the fertility intentions of nulliparous emerging adults and (2) to determine the prevalence of clinically significant FOC in nulliparous emerging adults. It is hypothesized that fertility intentions will have a significant effect on fear of childbirth and that there will be a significant gender difference in FOC in the current sample.

Hypotheses

1. There will be a significant gender difference in the fear of childbirth among nulligravida university students
2. There will be high fertility Intentions in nulligravida university students.
3. Fertility intention will have a significant influence on fear of childbirth in nulligravida university students.

Methods

The study adopted a cross-sectional descriptive survey design and sampled 366 students across 9 faculties at the Redeemer's University and the University of Ibadan. Inclusion criteria for the study were that participants are currently enrolled in the university, nulligravida (never been pregnant) with no known memory impairments. Ethical approval for the study was obtained from the ethics research panel based at the Behavioural Studies department of the Redeemer's University.

Research Instruments

A structured questionnaire was used in assessing FOC and fertility intention among nulligravida university students. The questionnaire contained three sections;

The first section consisted of 6 questions aimed at surveying the demographic characteristics of respondents.

The second section consisted of the Childbirth Fear Prior to Pregnancy (CFPP) (Stoll et al., 2016) which was used to assess fears and attitudes about childbirth in individuals who have not yet experienced pregnancy. The scale consists of 10 items and 3 dimensions: fear of pain and loss of control, fear of complications, and fear of physical changes caused by childbirth. The CFPP has a 6-point Likert scale response with scores ranging from 10 to 60 with higher scores revealing a higher fear of childbirth. The CFPP is a valid and reliable measure of fear of childbirth in non-childbearing individuals across cross-cultural settings (Tomazin et al., 2021; da Silva Ferreira et al., 2020)

The third section consisted of the Swedish Fertility Awareness Questionnaire (Lampic et al., 2006) which includes four domains. In the present study, only two domains were utilized (intention to have children and plans to have children). Responses were open-ended; a positive response was coded as 1 and a negative response was coded as zero. Higher scores indicate high fertility intention. The psychometric properties of the questionnaire has been established in several studies (Delbaere et al., 2021; Sørensen et al., 2016; Peterson et al., 2012).

Data Analysis

Data were analyzed using Statistical Package for the Social Sciences (SPSS) software. Descriptive statistics (mean, standard deviation, frequency and percentage) was applied in establishing the prevalence of the study variables among the population. This was also used to describe the socio-demographics of the study participants. T-test was employed in exploring gender difference in FOC and to examine differences in fertility intention on FOC.

Results

Socio-Demographic Data of Respondents

The socio-demographic factors of the participants were tested and presented in Table 1.

This distribution indicated the frequencies of such information as gender, academic year, faculty and age.

Table 1
Socio-Demographic Characteristics of Participants

Variables		Frequency	Percentage
Gender	Male	145	39.6
	Female	221	60.4
	Total	366	100
Academic Level	100 Level	10	2.7
	200 Level	79	21.6
	300 Level	161	44.0
	400 Level	100	27.3
	500 Level	16	4.4
	Total	366	100
Faculty	Arts	25	6.8
	Education	56	15.3
	Engineering	58	15.8
	Humanities	75	20.5
	Law	68	18.6
	Management sciences	28	7.7
	RNR	14	3.8
	Social sciences	24	6.6
	Sciences	18	4.9
Total	366	100	
Age (in years)	Mean:20.67; SD=1.33 Ranges between 17 to 24		

The sample of the present study comprised of nulligravida undergraduate students (N=366) with mean age of the participants as 20.67. More than half of the participants were female (60.4%) with about one-third (44%) in their third year of study.

Table 2
Fertility Intentions of Participants

Factors	Options	Frequency	%
Fertility Intentions	High	349	95.4
	Low	17	4.6
	Total	366	100

A majority (95.4%) of the participants had high fertility intentions. This indicates that they had expectations of birthing children in the future.

Test of Hypotheses

Table 3
Independent T-Test showing gender difference in FOC

N= 366

	Gender	N	Mean	SD	df	t	p
Fear of childbirth	Male	145	56.34	7.70	364	-2.12	<.05
	Female	221	57.81	5.60			

The results indicated that male participants (M= 56.34, SD= 7.70) had a significantly lower level of FOC than females (M= 57.81, SD= 5.60) $t(364) = -2.12$, $p < .05$. This implies a gender difference in FOC among the participants thus confirming hypothesis 1.

Table 4
Independent T-Test showing the significant influence of FOC on fertility intentions on fear of childbirth

N= 366

	Fertility intention	N	Mean	SD	df	t	p
Fear of childbirth	High	349	57.19	6.62	364	.52	>.05
	Low	17	58.24	4.64			

The results indicated no significant difference on FOC between participants who reported low fertility intentions ($M= 58.24$, $SD= 4.64$) and participants who have high fertility intentions ($M= 57.19$, $SD= 6.62$), $t(364) = .52$, ($p > .05$). The hypothesis was rejected.

Discussion

FOC has been shown to influence the decision-making framework, psychological well-being and overall satisfaction with the birthing experience in both females and males (ref). The current study explored the prevalence of clinically significant FOC in nulliparous university undergraduates prior to pregnancy and its effect on their future fertility intentions.

Our study's findings also supported the hypothesis that nulligravid university students exhibit high fertility intention. This result suggests that a considerable portion of the sampled students express a strong desire and intention to have children in the future. The prevalence of high fertility intention underscores the importance of understanding the factors that shape reproductive decisions among this specific population. This is in line with recent studies of young women and men planning to have children indicate that attitudes towards pregnancy and birth are well developed in this population, i.e. nulligravid university students. Furthermore, the results support the conclusion of these studies that addressing fear of birth during pregnancy might be too late, and earlier intervention is necessary. This could be achieved by developing educational modules for secondary school age students that address common fears and misconceptions about pregnancy and birth.

Majority of FOC studies are retrospective studies of childbirth in women. Since childbirth happens in a social context, it is imperative to examine FOC in the birthing woman's significant others of which a partner is key. It was therefore imperative to examine FOC in future male partners. As hypothesized, there was a significant gender difference in FOC levels in the sample. Females reported higher levels of fear related to childbirth compared to their male counterparts. This result is similar to the trend reported in the few studies that have examined male partner's FOC (Eriksson et al., 2006). In a study of Turkish couples FOC attending an outpatient obstetrics unit, higher FOC levels were reported by females than their male partners (Serçekuş et al., 2020). This gender differences in fear of childbirth could be influenced by societal norms, cultural expectations, and

biological factors related to socialized ideals of childbirth experiences. These findings indicate that it is important to include men in studies that assess the link between childbirth fear and birth outcomes, so that interventions can be developed that target the parent dyad, and not just the pregnant woman.

The study also aimed to explore whether fertility intention (desire to have children) among nulligravida university students would have a significant influence on the fear of childbirth. Contrary to the hypothesis, the study did not find a significant relationship between fertility intentions and fear of childbirth. This result aligns with the work of Smith et al. (2020), Brown et al. (2017), who similarly found that fertility intentions did not strongly predict fear of childbirth among nulligravida women. However, it's important to note that Smith et al.'s study focused on a broader population of women and not specifically on university students. This discrepancy may indicate that the relationship between fertility intentions and fear of childbirth could be influenced by contextual factors such as age, cultural background and personal experiences. Furthermore, the results also suggest that while fertility intentions could influence various reproductive decisions, they might not be the sole driving force behind the psychological experience of FOC. The lack of statistical significance in the present study emphasizes the need to consider a wider range of variables and their potential interactions in understanding fear of childbirth among nulligravid university students.

One notable limitation of this study is its restricted scope to two specific universities. The findings may not be readily generalizable to the broader university student population due to potential variations in demographic compositions, cultural contexts, and institutional settings across different universities. While the study revealed high fertility intentions among nulligravid university students, it did not extensively explore the underlying motivations or contextual factors driving these intentions. A more comprehensive investigation of the social, cultural, and personal determinants of fertility intentions could offer a richer understanding of the phenomenon. However, the study adds to the body of knowledge of a less researched sample in the FOC literature. In addition, it is beneficial to sustainable health care planning to understand FOC in young men and women who plan to have children in the future, to identify and address modifiable factors that might predispose them to FOC. Gaining insights into the nuances and influences

surrounding childbirth in the current sample can guide reproductive health policies that are relevant for the next generation of parents.

Conclusion

Even though fertility intention was high in the current study sample as evidenced by high fertility intention scores, a closer look at the results indicate that young adults who constitute the next child bearing generation may be experiencing a high rate of FOC which has the potential to influence key future decisions about child birth. Gaining insights into the nuances and influences surrounding childbirth in the current sample can guide reproductive health policies that are relevant for the next generation of parents.

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