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Perceived stigma by women with infertility accessing treatment in a tertiary health facility in Northern Ghana

Josephine M KYEI [1*], Charles AMPONG-ADJEI [1], Michael ANSAH-NYARKO [2], Salima MEHERALI [3]

[1] Department of Public Health, School of Nursing and Midwifery, College of Health Sciences, University of Ghana, Legon, Ghana; [2] Ghana Tertiary Education Commission, Research Department, Accra, Ghana; [3] University of Alberta, Faculty of Nursing, Edmonton, Canada

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Abstract

Background: Infertility is defined as the inability to achieve a clinical pregnancy following regular unprotected sexual intercourse for a period of 12 months or longer. One significant obstacle encountered by women dealing with infertility globally is the stigma attached to it.

Objective: The study aimed to explore the various ways by which women experiencing infertility are stigmatised in Ghana.

Methods: A cross-sectional survey was adopted, and participants were conveniently selected. A standardised Infertility Stigma Scale (ISS) was administered, and both univariate and multivariate analyses were performed. The alpha level was set at 0.5. Participants were recruited from a tertiary hospital in Northern Ghana between March 2020 and October 2021. A total of 302 women experiencing infertility and accessing fertility treatment participated in the study

Results: More than half of the participants (51.3 %, n = 155) self-reported perceived stigma. Age (r = 0.35, p = 0.01) and duration of infertility treatment (r = 0.33, p = 0.01) had a positive and significant relationship with infertility stigma, which is an indication that older married women and those with a longer treatment duration face the most stigma associated with infertility in their community. Further, married women with tertiary education were found to experience greater stigma from their families if they were unable to conceive after several years of marriage. Generally, participants perceived stigma from different social contacts, including family, friends, and the community at large.

Conclusion: Given the prevalence of infertility stigma in the study area, creating public awareness of the causes of infertility, as well as the consequences of stigma on the well-being of affected women, would be needed. It is also important that interventions that focus on enhancing the resilience of women with infertility to cope with public and enacted stigma are explored. These interventions, if designed with the views of the affected women and implemented in a culturally sensitive fashion, would help improve their quality of life.

Keywords: Stigmatisation, infertility, women, experiences, Ghana

INTRODUCTION

Infertility occurs when there is a failure to achieve a clinical pregnancy after regular unprotected sexual intercourse for 12 months or more [1]. Recent evidence suggests a downward trajectory in the burden of infertility in high-income countries but an upward trend in other countries, including those in Africa [2]. What seems to be a major challenge facing women with infertility worldwide is stigmatisation [3,4,5,6]. There are numerous determinants of infertility-related stigma. These include the perception that women with infertility have been involved in multiple abortions, led a promiscuous lifestyle, or living under a generational curse of childlessness [3,4,7]. For example, a study conducted in Ghana examined the beliefs women hold regarding childbirth. It reported that women experiencing infertility were perceived to have had a series of abortions,

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* Corresponding author
Email: jmkyei@ug.edu.gh

leading to uterine abnormalities and, subsequently, miscarriages [3]. Others also believe that infertility is attributed to generational curses whereby the fulfilment of special demands, such as riches from a deity, could be exchanged for childlessness along that family lineage [4].

Infertility-related stigma manifests in various ways [3,5,7]. Studies across the globe indicate that women with infertility face discrimination by society [5,6] and are labelled as abnormal, useless, and deficient [8,9]. They are also insulted, despised, and considered as ominous [10]. Nonetheless, the experience of this stigma differs from one culture to another. For instance, in the United States (US), a study by Greil et al. on 'the Social Construction of Infertility' found that with a strong emphasis on every female becoming a biological mother across the culture of the United States, infertile women who participated in the study reported feeling marginalised and perceived as abnormal or deviant due to their unintended inability to become pregnant and bear children [11]. Further, a similar study in Northern Ghana indicated that women with infertility are often isolated from other society members, prevented from participating in ceremonies and particularly prohibited from having bodily contact with other people's children [12]. In Uganda, a survey by Cui [13] on the agony of infertility among females reported that women with infertility are faced with societal stigmatisation, ostracism, and discrimination. Some women are reportedly banned from appearing at social gatherings and regarded as "the cursed" [13].

This level of stigmatisation often intensifies the feeling of shame and guilt in these women. Infertility-related stigma has enormous consequences. It presents varied degrees of mental disorders in women [6,14,15,16], particularly in Africa [3]. These stressors are heightened among women above 35 years, those who have experienced 4 to 6 years duration of infertility and living in a cohabitation marriage [16,17]. Essentially, the challenges are mostly driven by beliefs about the causation of infertility [3,4] as well as the perceived benefit of children, including social and economic support, continuity of family lineage, and societal recognition [3]. For example, in the southern part of Nigeria, being able to conceive and bring forth a child are essential prerequisites for the initiation of females into motherhood, and women with infertility are maltreated and called "men" by their partners, relatives, and in-laws [18]. The stress that characterises infertility compels a number of affected women to adopt different treatment options, including the use of assisted reproductive technologies and herbal medicines [19,20]. Others also resort to prayer with the belief that God will intervene in their predicament [21], whereas some also opt for the adoption of a child [21].

In Ghana, quantitative assessment of infertility-related stigma appears to be missing despite the existence of stigma in the socio-cultural context. The only study that provides evidence regarding infertility was conducted in southern Ghana [8]. We believe that a quantitative assessment of infertility-related stigma, particularly in northern Ghana, would complement the findings in southern Ghana to inform stigma reduction intervention.

MATERIALS AND METHODS

Study design and sites
A cross-sectional survey was employed for this study. Women with infertility and accessing fertility treatment at the Tamale Teaching Hospital in the Northern Region of Ghana were recruited for this study. The region comprises a large geographical area but is sparsely populated. The hospital serves as a referral hospital for the five regions in the northern part of Ghana. It has various units, and it includes the Obstetrics and Gynaecology unit, which serves women with various reproductive health issues, including the treatment of infertility.

Sample size and sampling technique
A convenience sampling technique was employed to select women who were seeking infertility treatment. The Yamane formula for calculating sample size was used for sample size determination. A total of 302 women experiencing infertility and accessing fertility treatment were selected to participate in the study.

The Sample Size Determination of Yamane

$$n = N/(1+N (e)2 = 682/(1+682 (0.05)2 = 252$$

Where:
n = Sample size
N = Population size
e = margin of error
The margin of error is permissible, e = 0.05.
The population size of women seeking fertility treatment at Tamale Teaching Hospital during the study period was N = 682.

However, 20% was added to the sample to take care of non-responses. The study's sample size was established at 302, following the above calculation. The purpose of the study was explained in detail to the participants in order to get their cooperation during the recruitment session. Informed consent was obtained from the study participants. Participants who agreed to take part in the study were provided with information regarding the study and were asked to sign a consent form. The Infertility Stigma Scale (ISS) questionnaire was used to measure both perceived stigma and self-stigma for women with infertility. The Infertility Stigma Scale contains 27 items divided into four factors, which include self-devaluation (7 items), social withdrawal (5 items), public stigma (9 items), and family stigma (6 items). The responses to each item were based on a 5-point Likert scale (1 = completely not agree, 2 = not agree, 3 = not sure, 4 = agree, 5 = completely agree). A research assistant aided the women in completing an interviewer-administered questionnaire. Data was collected between March 2020 and October 2021. The data was analysed using IBM SPSS Statistics for Windows, Version

22.0, Armonk, NY: IBM Corp. The data was first entered in Excel and cleaned by running preliminary frequencies of all the variables to check for inaccuracies.

RESULTS

The study involved 302 women who were receiving fertility treatment. The average age of the women was 28.39 ± 3.14, with an age range of 22 to 40 years. The majority (70%, n = 211) of the women were between the ages of 26 and 30 years inclusive. All participants, but one woman, were married. The greatest proportion of the participants had no formal education (31.50%, n = 95), with secondary education being the least represented at 17.90% (n = 54). In relation to occupation, half of the participants were traders (49.70%, n = 150), with farming having the lowest representation

(4.0%). The majority were Muslims (60.30%, n = 182). The average years of treatment was 3.78 ± 1.51. The demographic characteristics of participants are presented in Table 1. The overall stigma scores for infertility were found to be normally distributed, with skewness and kurtosis values within ±1. All the subscales, namely self-devaluation, social withdrawal, public stigma, and family stigma, had a normally distributed distribution and fell within the range of ±1. The result also shows that none of the participants had the lowest score of 27 and the highest score of 135. That indicated that none of the participants experienced extremely low or high infertility stigma (Table 2). Using the mean split procedure, it was seen that infertility stigma was prevalent across all four levels. Hence, more than half of the individuals reported having a high level of infertility stigma (Table 2). This demonstrates that most people held a negative view of infertility, which respondents were subjected to.

The descriptive statistics and Pearson correlation table show that at the 0.01 level of significance, age (r = 0.35, p = 0.01) and duration of infertility treatment (r = 0.33, p = 0.01) had a positive and significant relationship with infertility stigma. This suggests that, on average, older women and those with a longer treatment time faced the most stigma associated with infertility in their community. Additionally, two variables (age and duration of infertility treatment) were examined on the four dimensions of the infertility stigma construct. Age had a positive and significant association with self-devaluation (r = 0.25, p = 0.01), social withdrawal (r = 0.24, p = 0.01), and public stigma (r = 0.34, p = 0.01) at the 0.01 level of significance but had no significant relationship with family stigma. Infertility treatment duration had a positive and significant relationship with self-devaluation, social withdrawal, and public stigma but

Table 1. Sociodemographic characteristics of participants

Characteristics	n	%
Educational level		
No formal	95	31.50
Basic	75	24.80
Secondary	54	17.90
Tertiary	78	25.80
Occupation		
Farming	12	4.00
Trading	150	49.70
Civil servants	73	24.20
Healthcare worker	5	1.70
Unemployed	60	19.90
Other	2	0.50
Religion Affiliation		
Christian	120	39.70
Muslim	182	60.30

Table 2. Mean, standard deviation, skewness and kurtosis of the subscales of infertility stigma among women in the Northern part of Ghana

Measure	Scores			Dispersion			Normality	
	Min	Max	Range	Mean	SD	Median	Skew	Kurtosis
Self-Devaluation	9	32	23	19.23	4.51	19.00	.23	-.35
Social Withdrawal	5	22	17	12.59	3.22	12.00	.20	-.17
Public Stigma	11	42	31	22.73	4.76	22.50	.57	.78
Family Stigma	11	29	18	19.1	3.54	19.00	.08	-.46
Infertility Stigma	52	120	68	73.71	9.91	74.00	.51	.96

Table 3. Descriptive statistics and pearson correlations for study variables

Variables	M	SD	1	2	3	4	5	6	7
1. Age	28.39	3.14	-						
2. Infertility Treatment Duration (years)	3.78	1.51	.83**	-					
3. Self-Devaluation	19.23	4.51	.25**	.23**	-				
4. Social Withdrawal	12.59	3.22	.24**	.29**	.20**	-			
5. Public Stigma	22.73	4.76	.34**	.26**	.35**	.22**	-		
6. Family Stigma	19.16	3.54	-.02	.01	.03	.13*	.02	-	
7. Infertility Stigma	73.71	9.91	.35**	.33**	.70**	.57**	.72**	.42**	-

not family stigma. It might be concluded that the age of married women and the duration of their infertility treatment influenced self, social withdrawal, and their anxiety about public stigma (stereotypes, prejudice, and prejudgment) (Table 3). Two demographic characteristics, which included religion and education, were used as independent variables, while self-devaluation, social withdrawal, public stigma, and family stigma were used as dependent variables. Significant multivariate effects were seen for both religion and education (Table 4), with religion and education accounting for 1.0 and 4.4% of the variance, respectively. Additionally, there is a substantial multivariate influence of the interaction between religion and education on infertility stigma, accounting for 2.4% of the variance in the four-infertility stigma experience. The participant's religious membership did not significantly predict self-devaluation, social withdrawal, or public stigma in univariate models. This demonstrates that a married woman's religion does not influence the stigmatisation of infertility. However, univariate analyses of education revealed that only family

Table 4. Significant multivariate effect for religion and education on infertility stigma ($p \leq 0.05$)

Factors	Pillai's Trace	F	df	Error df	p	Partial Eta Squared
Religion	.010	0.73[b]	4	291	.57	.010
Education	.131	3.347	12	879	.00	.044
Religion * Education	.071	1.778	1	879	.05	.024

Table 5. Univariate analysis of religion and education on infertility stigma subscales

Factors		Dependent variables	Descriptive		F (1, 294)	p
			M	SD		
Religion	Christianity	Self-Devaluation	18.51	4.45	1.98	.16
	Islam		19.70	4.50		
	Christianity	Social Withdrawal	12.30	3.29	.12	.73
	Islam		12.78	3.16		
	Christianity	Public Stigma	22.02	4.29	1.05	.31
	Islam		23.20	5.00		
	Christianity	Family Stigma	19.32	3.64	.80	.37
	Islam		19.06	3.48		
					(3, 294)	
Education	No Formal	Self-Devaluation	20.02	4.70	2.09	.10
	Basic		19.53	4.88		
	Secondary		18.65	3.81		
	Tertiary		18.35	4.21		
	No Formal	Social Withdrawal	13.12	3.16	2.29	.08
	Basic		12.81	3.05		
	Secondary		12.35	3.50		
	Tertiary		11.90	3.16		
	No Formal	Public Stigma	23.99	4.99	1.92	.13
	Basic		22.47	4.48		
	Secondary		22.20	4.27		
	Tertiary		21.82	4.84		
	No Formal	Family Stigma	18.20	3.21	8.09	.00
	Basic		19.35	3.27		
	Secondary		18.46	3.95		
	Tertiary		20.64	3.43		
Religion * Education		Self-Devaluation			2.82	.04
		Social Withdrawal			.66	.58
		Public Stigma			1.18	.32
		Family Stigma			1.15	.33

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stigma was relevant (p = 0.00), but not self-devaluation, social withdrawal, or public stigma. According to the mean scores, women with tertiary education in northern Ghana face greater stigma from their families if they are unable to conceive (Table 5). The interaction effect between religion and education was examined, and the result shows that there was a significant interaction effect on self-devaluation between religion and education (p = 0.04).

DISCUSSION

This study provides insight into the degree of perceived stigma among infertile women in the northern part of Ghana. The ISS questionnaire was used to assess stigma in the following forms: self-devaluation, social withdrawal, public stigma, family stigma, and the overall stigma of infertility. The findings show that women who were 35 years and above and have been seeking treatment for a longer period, usually after a year, face the most stigma associated with infertility in their community. It was found that the age of women and the number of years they had been seeking infertility treatment influenced self, social withdrawal, and their anxiety about public stigma. The findings in this current study are consistent with findings from a study that indicated that women faced pressure from the family and community [24]. In determining the relationship between age and duration of infertility treatment, the study found a significant positive relationship between age, duration of infertility treatment, and infertility stigma. Older women and those undergoing longer treatments experience more stigma in their communities. Age is significantly associated with self-devaluation, social withdrawal, and public stigma but not with family stigma. Similarly, the duration of infertility treatment is linked to self-devaluation, social withdrawal, and public stigma, but not family stigma. In conclusion, both age and treatment duration influence self-perception, social behaviour, and anxiety about public stigma among women facing infertility.

Similar findings were found in a study by Donkor and Sandall [8] on the impact of perceived stigma and mediating social factors on infertility-related stress among women seeking infertility treatment in Southern Ghana. Regarding social withdrawal stigma, the study found that respondents experienced the feeling of being embarrassed when asked questions about kids and were more sensitive to issues about pregnancy and children because they could not get pregnant. As a result, they avoided getting close to people who did not have fertility problems. Public stigma experienced by the participants in this current study indicated the most common form of the stigma the women experienced. These included being discriminated against during decision-making in society, people gossiping about them, and they felt people viewed them differently. Similar studies have also reported the negative attitude experienced by women experiencing infertility within their communities [6,26]. Family infertility stigma was found to come from different social agents, including the family members of the infertile women. The predominant form of the family stigma the women experienced was coming from their mothers-in-law, who had issues with them due to the problem of infertility. Other common forms of the family stigma they experienced included a negative relationship with their husbands, who thought the women were the cause of infertility. Again, some women also indicated that they were afraid their marriage would be affected as family members influenced their partners to divorce them. A study conducted by Feldman-Savelsberg [27] in Cameroun among women experiencing infertility also reported that the study participants experienced divorce due to family stigmatisation.

Earlier studies on infertility are limited to qualitative designs, but this study quantitatively assessed infertility-related stigma in northern Ghana. However, the application of a standardised scale for the measurement of stigma enhances the credibility and reliability of the study findings. The use of cross-sectional design in this study limits the establishment of a cause-and-effect relationship. The study sites were confined to the northern region of Ghana, and therefore, there is the possibility of variations that may not represent the views of individuals seeking treatment in the southern sector.

Conclusion

The study provides insight into the degree of perceived stigma among infertile women in Northern Ghana. We found that a woman's age and the number of years spent seeking infertility treatment influenced self, social withdrawal, and anxiety about public stigma. The predominant form of the family stigma the women experienced was traceable to mothers-in-laws. Generally, most people hold a negative view of infertility. Therefore, we recommend a public sensitisation programme on issues of infertility and its effect on the women experiencing it. Nurses at the forefront of health care should go through counselling training to be able to assist these women who are facing various forms of stigma relating to infertility. Again, knowledge about the psychological challenges women face will improve counselling sessions, as well as inform policy on how to address issues about the stigma associated with infertility.

DECLARATIONS

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