Investigating the Relationship Between Stigma and Abortion Safety: Preliminary Findings from a Survey in Nigeria

Mridula Shankar[1], Grace Sheehy[1], Suzanne Bell[1], Elizabeth Omoluabi[2], Funmilola OlaOlorun[3], Caroline Moreau[1]

[1]Johns Hopkins Bloomberg School of Public Health
[2]Centre for Research, Evaluation Resources and Development, Ile-Ife, Nigeria
[3]College of Medicine, University of Ibadan, Ibadan, Nigeria

Background

In Nigeria, induced abortion is legal only to save a woman's life. Approximately half of unintended pregnancies in the country are terminated, for a total of approximately 1.25 million abortions per year (Bankole et al. 2015). The majority of these are unsafe. Approximately 500,000 women experience serious health complications from unsafe abortion every year, and less than half receive treatment for these complications (Bankole et al. 2015). Barriers to accessing post-abortion care can include the costs associated with seeking medical care, geographic barriers to accessing formal health facilities, and stigma associated with having an abortion.

Abortion stigma is defined as "the discrediting of individuals as a result of their association with abortion" (Norris et al. 2011). Abortion stigma is pervasive in countries around the world, but varies by individual and social contexts. There is a dearth of evidence on abortion stigma in West Africa, including how it influences women's access to and use of safer abortion care. One study conducted in Nigeria explored individual-level abortion stigma among women obtaining safe abortion care at health facilities, and found that a substantial minority expressed high levels of stigma, with variation by age and educational levels (Oginni et al. 2018). However, no research in Nigeria has explored abortion stigma among women more broadly, or among women who have had abortions outside the formal health sector.

The objectives of this study were to explore the extent of abortion-related stigma in Nigeria among women of reproductive age, including how it varies by sociodemographic characteristics, and additionally to understand how abortion stigma is associated with the safety of abortion care.

Methods

Data

The data for this analysis are drawn from a cross-sectional, population-based survey of reproductive age women (15 to 49) in Nigeria. The survey was conducted by Performance Monitoring and Accountability 2020 (PMA2020) and the Centre for Research, Evaluation Resources and Development, the local implementing partner. PMA2020 conducts rapid and low-cost surveys over regular intervals in 11 countries across sub-Saharan Africa and South and South-East Asia to collect data and monitor trends on family planning and other reproductive health indicators (Zimmerman et al. 2017). In Nigeria, PMA2020 uses a two-stage cluster sampling design within a sample of seven states to yield national and state-representative samples of households and women. In each of the seven states, geographical units called enumeration areas (EA) are randomly selected using probability proportional to size (PPS) sampling, with 35-40 households randomly selected within each EA. Female residents of the selected households who are age 15 to 49 are consented to participate in face-to-face interviews with female data collectors. In the most recent survey round (Round 5), researchers added an abortion module to the core female questionnaire. Data were collected from April through May, 2018. The National Health Research Ethics Committee of Nigeria and the Johns Hopkins Bloomberg School of Public Health provided ethical approval for this study.

Measures
The abortion module was designed to collect data on knowledge and sources of abortion methods, perceptions on availability within the community, individual attitudes towards abortion, and personal and confidante experiences of pregnancy removal and period regulation. Here, we only describe and use measures related to respondent's personal experience with pregnancy removal alone. The primary question to elicit this information was whether they had ever done something to remove a pregnancy when they were pregnant or worried about being pregnant. If respondents reported undergoing multiple pregnancy removals, they were asked to respond to subsequent questions with reference to the most recent one. We obtained information on the year it occurred, the first and last or only method(s) used, the provider or source of these methods, and whether a health facility visit was required for any issues experienced in the course of terminating the pregnancy.

We used the details on method(s) and sources(s) to classify abortions into three safety categories — safe, less safe and least safe — based on recent work led by the World Health Organization (WHO). (Ganatra et al. 2017). The WHO work is an effort to replace the dichotomous safety categorization with a three-tiered classification that allows for more nuance in the categorization of abortion safety. We classified abortions as *safe* if the only method or methods used were surgery or mifepristone and/or misoprostol provided in public or private facilities. Any abortions that included use of mifepristone and misoprostol sourced from a pharmacy/chemist, and the use of other/unknown pill types provided at a public or private facility were all classified as *less safe*. All other abortions not captured in either of these two categories were classified as *least safe*.

Respondents were also asked a series of questions regarding attitudes towards abortion and norms around the practice. For this analysis, we used the question "*A woman who removes a pregnancy brings shame to her family*", as a proxy for abortion stigma. We recategorized responses from a five-part Likert scale ranging from strongly disagree to strongly agree into a dichotomous "agree"/"disagree or neutral" variable.

Analyses
We first examined the socio-demographic characteristics of the sample. Next, we determined the proportion of women who agreed that abortion brings shame, and evaluated differences in this perception by key background characteristics. We calculated the overall prevalence of abortion, and assessed the proportion of all reported abortions that fell into each of the three safety categories. We examined differences in safety by age at abortion and background characteristics. We then examined the distribution of safety by shame, using the three-part safety classification. Using logistic regression, we estimated the unadjusted and adjusted associations between the outcome of least safe abortions by perceptions of shame. These preliminary analyses are weighted to account for the complex survey design.
In subsequent analyses, we will use multinomial logistic regression with the three tier-safety variable as the outcome. We will also attempt to use a composite variable as a proxy for abortion stigma using a combination of the abortions norms and attitudes data to further explore this relationship.

Results
A total of 11,106 women completed the survey. The average age was 29 years, and two-thirds (66%) of the sample had secondary or higher education and were currently married or cohabiting (Table 1). Overall, 64% of respondents agreed that abortion brings shame to the family. Women in the youngest age-group (15-19), in the poor and middle wealth categories, and those with secondary and lower educational attainment reported highest levels of agreement (Table 2).

The lifetime prevalence of induced abortion was 15% (results not shown). Among all reported pregnancy removals, 41% were safe, 9% less safe and 50% least safe (Table 3). Levels of safety differed significantly by residence, wealth, and educational levels, with women living in rural areas, poorer women and those with at least some secondary education or less more likely to have least

safe abortions. For instance, 7 out of 10 abortions amongst women in the poorest wealth quintile were least safe compared to 4 in 10 abortions amongst the wealthiest women ($p<0.001$).

Safety was also significantly associated with perceptions of shame. In an unadjusted model, women who agreed that abortion brings shame had 46% higher odds [OR:1.46; 95% CI: 1.07-2.00] of a least safe abortion compared to our reference group of women who disagreed or were neutral. In an adjusted model, accounting for age at abortion, wealth, and educational levels, women with perceptions of abortion shame had a 32% increased odds of a least safe abortion compared to the reference, however this association was no longer significant [OR: 1.32; 95% CI 0.96-1.82] (Table 4). Wealth remained a significant predictor of safety, with women in the middle and upper wealth quintiles having a 63% and 59% reduced odds of least safe abortions in comparison with the poorest women.

Discussion

To our knowledge, this study is the first to attempt to quantify the role of abortion stigma —as assessed through perceptions of abortion bringing shame to the family— on influencing women's abortion pathways, and associated safety. While stigma appears to make least safe abortions more likely, this relationship is attenuated when adjusting for wealth, indicating that women's access to resources likely play a more significant role when it comes to accessing safe abortion care.

These findings provide new estimates of abortion safety and its correlates amongst women in Nigeria. Using the three-tier safety framework, we find that the majority of abortions are unsafe, with the highest proportion being least safe. In a context where women commonly use induced abortion as a method to manage fertility (Bankole et al. 2015), the poor safety associated with over half of abortions poses a serious threat to women's health, overall wellbeing, and survival. Further, the risk of least safe abortions is distributed unevenly across the population, with rural, poorer, and less educated women more likely to have unsafe abortions, an important indicator of existing inequities in access to sexual and reproductive healthcare.

Table 1. Characteristics of female respondents age 15 to 49 in Nigeria*		
Characteristic	%	N
Age		
15-19	18.8	2,257
20-24	16.4	1,870
25-29	18.6	2,040
30-34	15.2	1,629
35-39	13.9	1,473
40-44	10.4	1,102
45-49	6.6	735
Education		
Never	17.9	2,355
Primary	15.7	1906
Secondary	46.2	4,934
Higher	20.2	1911
Marital Status		
Currently married/cohabiting	64.4	7378
Divorced/widowed	4.6	515
Never married	31.0	3211
Religion		
Catholic	14.7	1593
Other Christian	44.1	3823
Islam	39.3	5369
Other	1.9	321
Ethnicity		
Hausa	21.4	3524
Igbo	22.4	2071
Yoruba	12.9	1015
Other	43.3	4496
Residence		
Rural	45.0	5701
Urban	55.0	5405
Wealth		
Poorest	23.3	3050
Poorer	20.5	2588
Middle	17.4	1925
Richer	18.5	1779
Richest	20.3	1764
State		
Anambra	12.9	1419
Kaduna	9.5	2766
Kano	13.2	1751
Lagos	21.0	1590
Nasarawa	13.5	1536
Rivers	17.1	1223
Taraba	12.8	821
Total	100.0	11,106

* Estimates weighted, Ns unweighted

Table 2. Perceptions of abortion stigma (abortion brings shame to the family) by background characteristics amongst female respondents in Nigeria ages 15-49

Characteristic		Disagree (n=4,012) %	Agree (n=7,042) %	p-value
Overall		36.5	63.5	N/A
Age				
	15-19	28.9	71.1	<0.001
	20-24	35.3	64.7	
	25-29	37.9	62.1	
	30-34	41.5	58.5	
	35-39	41.3	58.7	
	40-44	35.9	64.1	
	45-49	36.0	64.0	
Education				
	Never	33.8	66.2	<0.001
	Primary	34.8	65.2	
	Secondary	33.2	66.8	
	Higher	47.5	52.5	
Religion				
	Catholic	35.5	64.5	0.686
	Other Christian	38.0	62.0	
	Islam	35.4	64.6	
	Other	29.6	70.4	
Ethnicity				
	Hausa	33.2	66.8	0.300
	Igbo	33.9	66.1	
	Other	38.7	61.3	
Residence				
	Rural	31.2	68.8	0.300
	Urban	40.8	59.2	
Wealth				
	Poorest	33.9	66.1	<0.05
	Second poorest	31.7	68.3	
	Middle	33.2	66.8	
	Second wealthiest	40.9	59.1	
	Wealthiest	43.1	56.9	

Table 3: Safety of pregnancy removal by age at abortion and select background characteristics among women in Nigeria ages 15-49

Characteristic		Safe (n=498) %	Less safe (n=124) %	Least safe (n=748) %	p-value
Overall		41.5	8.8	49.7	N/A
Age at abortion					
	10-14	53.3	0.0	46.7	0.41
	15-19	38.8	6.5	54.7	
	20-24	45.8	8.0	46.1	
	25-29	41.2	9.7	49.2	
	30-34	41.2	13.0	45.8	
	35-39	30.6	10.5	58.9	
	40-44	38.5	10.0	51.5	
	45-49	15.1	15.9	69.0	
Education					
	Never	16.1	10.3	73.6	<0.005
	Primary	36.7	6.3	57.0	
	Secondary	40.5	10.3	49.1	
	Higher	50.1	7.0	42.9	
Residence					
	Rural	27.7	10.5	61.8	<0.005
	Urban	46.8	8.2	45.1	
Wealth					
	Poorest	18.8	11.0	70.2	<0.001
	Second poorest	25.1	7.3	67.6	
	Middle	47.6	8.9	43.5	
	Second wealthiest	45.9	9.4	44.6	
	Wealthiest	49.1	8.3	42.7	

Table 4. Unadjusted and adjusted odds ratios and 95% confidence intervals for the outcome of a least safe abortion by perceptions of abortion bringing shame to the family

Characteristic	Unadjusted Odds Ratio	95% CI	Adjusted Odds Ratio	95% CI
Abortion brings shame				
Disagree	Ref		Ref	
Agree	1.459*	1.067 - 1.996	1.323	0.963 - 1.820
Age at abortion				
10-19	--		Ref	
20-29	--		0.939	0.644 - 1.370
30-39	--		1.051	0.664 - 1.664
40-49	--		0.910	0.399 - 2.076
Educational Level				
None	--		Ref	
Primary	--		0.559	0.284 - 1.098
Secondary	--		0.569	0.284 - 1.143
Higher	--		0.542	0.260 - 1.129
Wealth				
Poorest	--		Ref	
Poorer	--		0.981	0.610 - 1.579
Middle	--		0.372	0.193 - 0.717
Richer	--		0.413**	0.227 - 0.750
Richest	--		0.384**	0.216 - 0.684

* $p<0.05$
** $p<0.005$

References

Bankole A, Adewole IF, Hussain R, Awolude O, Singh S, Akinyemi JO (2015) The Incidence of Abortion in Nigeria Int Perspect Sex Reprod Health 41:170-181 doi:10.1363/4117015

Ganatra B et al. (2017) Global, regional, and subregional classification of abortions by safety, 2010-14: estimates from a Bayesian hierarchical model Lancet (London, England) 390:2372-2381 doi:10.1016/s0140-6736(17)31794-4

Norris A, Bessett D Fau - Steinberg JR, Steinberg Jr Fau - Kavanaugh ML, Kavanaugh Ml Fau - De Zordo S, De Zordo S Fau - Becker D, Becker D (2011) Abortion stigma: a reconceptualization of constituents, causes, and consequences

Oginni A, Ahmadu SK, Okwesa N, Adejo I, Shekerau H (2018) Correlates of individual-level abortion stigma among women seeking elective abortion in Nigeria

Zimmerman L, Olson H, Tsui A, Radloff S (2017) PMA2020: Rapid Turn-Around Survey Data to Monitor Family Planning Service and Practice in Ten Countries Studies in family planning 48:293-303 doi:10.1111/sifp.12031