Exploring the relationship between abortion stigma and abortion reporting in two health and demographic surveillance sites- a pilot study.

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Abstract

Incomplete data on induced abortion compromises researcher's ability to conduct rigorous research on all pregnancy and fertility-related indicators. Stigma is typically cited as a major cause of individual level under-reporting of induced abortion in surveys and is thought to vary by the restrictiveness of the context women find themselves in with worse reporting in the most restrictive countries. In such contexts, there has been a recent expansion in the use of indirect survey approaches such as the confidante method to generate more valid estimates of abortion incidence and safety. Although this method yields increased reporting compared with self-report, it has been shown to have many biases with some requiring statistical adjustment to yield robust estimates. In this paper, we apply two standardized stigma scales to measure the degree of abortion-related stigma women report in a survey. We explore if different domains of stigma affect one of the most important biases of indirect survey approaches- transmission bias- by assessing its relationship with the likelihood of self-report and third-party reports of abortion. Understanding the relationship between stigma and reporting biases is important to refine the framework for measuring and adjusting for biases in survey approaches to measure abortion incidence and safety.

Introduction

Stigma has broadly been conceptualized as a social process that is dependent on the context and appropriated by individuals at varying levels which often results in negative stereotyping of less-powerful group of people ultimately translating into exclusion, loss of status, and discrimination(1). In many contexts globally, social norms and attitudes to induced abortions tend to be conservative such that obtaining and providing abortions are often stigmatized. Thus, collecting representative data on induced abortion as part of fertility experiences via surveys is challenging because it is underreported by women(2,3). Inaccurate data on abortions in a context affects the availability of complete data on pregnancies and the ability to conduct rigorous research on all pregnancy and fertility-related indicators(4).

Kumar et al defined abortion stigma as the attribution of a negative reputation by society to women who seek to terminate a pregnancy marking them as inferior(5). As with other sensitive or stigmatized behaviors, the degree of underreporting of induced abortion is thought to be correlated with the degree

of stigma(6), suggesting that survey-based estimates from contexts with more restrictive policies and attitudes are less likely to be complete than in more liberal contexts. Indeed, some studies have shown that women's perception of abortion stigma is positively correlated with their desire for secrecy about their own abortions so that we may hypothesize that women who experience greater stigma are less likely to report(7). To account for the challenges of collecting abortion-related data via direct self-report in restrictive contexts, researchers have recently begun to apply indirect methodologies which rely on women reporting on induced abortions within a surrogate sample from their social networks(8). The overall premise of these approaches is that women are more likely to report on the abortions of others than theirs because this is less stigmatizing.

Although induced abortion reporting in many contexts improves significantly by applying network-based approaches, methodological explorations of these methods show that they are still unable to elicit complete information on all abortions in the population- an important limitation called transmission bias(9–11). With no gold standard method of estimating the incidence of abortion in restrictive contexts where unsafe abortions are most prevalent, and a growing use of network-based approaches, it is crucial for researchers to refine methods to estimate the magnitude of transmission bias and adjust for it within these approaches. Some of the challenges associated with developing a robust framework measuring transmission bias is a clear understanding of how induced abortion information is shared within social networks, how this varies across contexts and the factors that can predict the degree of sharing(12). Although stigma is often cited as an important factor that facilitates or inhibits the sharing of abortion information by women, it is a complex phenomenon to measure and there are no studies that have attempted to quantify abortion stigma as part of these approaches or explore its impact on both direct reporting and third-party reporting of induced abortion.

Researchers have proposed applying a three-domain framework to understanding how women experience abortion stigma. This approach describes three levels of stigma: perceived stigma which relates to women's impressions about society's negative attitude towards induced abortions and how this might translate into discriminatory actions, internalized stigma which results from women absorbing the negative attitudes of society into how she perceives herself because of her induced abortion ,and enacted stigma which encompasses actual discriminatory actions women experience because of their abortions(1). A few standardized scales have been developed to measure some of these stigma domains amongst women including the Individual Level of Abortion Stigma scale (ILAS)(13) and the Stigmatizing Attitudes, Beliefs and Actions Scale (SABAS)(14). ILAS is a multidimensional scale with four domains which measures stigma amongst women who have abortions. It has a specific community condemnation subscale that measures perceived societal negative attitude towards abortions. SABAS on the other hand measures the respondents self-reported individual attitude towards abortion seekers which likely reflects both elements of community level stigma from the respondent's context and their own values related to abortion. The objective of this pilot study was to quantify some of the domains of abortion stigma experienced by women and to examine the impact of stigma on direct and third-party abortion reporting within a network-based approach in two contexts with restrictive abortion policies.

Methods

Study setting and population

This study was one component of the pilot phase of a larger ongoing study on abortion measurement in two Health and Demographic Surveillance Systems (HDSS) sites- the Nairobi HDSS in Kenya and the Kaya HDSS in Burkina Faso. HDSS sites are run by independent research centers and monitor the demographic characteristics and health events (vital statistics) of a population in a well-defined area within a country(15). They provide complementary data to other mechanisms such as censuses and demographic health surveys. The availability of routine data on the populations in these sites provides useful opportunity to test and validate network-based approaches to collecting data on abortion. In both countries where the study was fielded, induced abortion is allowed on narrow grounds. In Burkina Faso, abortion is allowed on the grounds of rape, incest, fetal impairment, saving the woman's life and health. In Kenya, abortion is legal if it is performed to protect the women's health (health) or if the pregnancy is life-threatening or the pregnant women's life is otherwise endangered (life).

Sampling

The pilot studies were conducted in communities adjacent to both HDSS sites because the full study will be conducted within the actual geographic sites. In Nairobi, a non-random sample of women was selected. They included women who had obtained an abortion and women who were connected to abortion seekers. 102 women were interviewed in total. In Burkina Faso, the study was conducted in Ouahigouya and the sample was selected following a quasi-random design, so pertained to the general population of women aged 15 to 49. The field team divided the town into 14 quarters; went in and started with a street; interviewed women in three houses; then changed street, leaving two streets in between. There were a relatively high number of refusals, once women understood the survey was on abortion; but the team just proceeded to the next house until having a large enough sample. 150 women were interviewed.

Network- based approach for collecting population representative abortion indicators

For this study we utilized a refined version anonymous third-party reporting method (ATPR) also known as the confidante method. The ATPR was developed in 2003 after ethnographic work in Burkina Faso and asks respondents to report anonymously on recent abortions amongst their close female relations.(16)) In this study we asked women to enumerate three close relations. We collected data on the sociodemographic characteristics of respondents and their confidantes, count and characteristics of abortion amongst confidantes, respondent's reproductive history including abortions, visibility of respondent's abortions and abortion stigma.

Abortion stigma

For this analysis we attempted to measure three dimensions of stigma using the ILAS and SABAS scales: Perceived stigma towards induced abortion within the broader community, personal attitudes towards people who have induced abortions and internalized stigma amongst women who self-reported induced abortions.

We measured perceived community stigma amongst all respondents to our survey using the community condemnation subscale of ILAS. We reworded one question positively (we changed "people think that abortion is always wrong" to "people think that abortion is sometimes good").

We measured individual attitudes towards women inducing abortions using an adapted version of SABAS among all women who did not self-report an induced abortion. We dropped four questions out of

the 14 original questions because they seemed too demeaning to the study investigators to ask (I would tease a woman who has had an abortion so that she will be ashamed about her decision; I would try to disgrace a woman in my community if I found out she'd had an abortion; I would stop being friends with someone if I found out that she had an abortion; I would point my fingers at a woman who had an abortion so that other people would know what she has done).

We measured internalized stigma amongst women who self-reported induced abortions using the full ILAS scale.

Each scale has no fixed cut-off scores: the higher the score on either scale, the greater the stigma.

Analysis

We calculated summary scores for each subscale and the overall scale for both ILAS and SABAS within each site. For community condemnation scores could range from 1 to 5, for individual attitudes from 18 to 90 and for internalized stigma from 1 to 4.09.

Because the sample in Kenya was a purposive sample, 100 (98%) women reported having confidantes and 37 (37%) reported an induced abortion compared with 87 (58%) of respondents reporting a confidante and 9 women (6%) reporting an abortion in Burkina Faso where the sample was quasi-random.

We examined the correlation between community condemnation and individual attitude scores in Burkina Faso and Kenya amongst women not reporting abortions, and community condemnation and internalized stigma in Kenya using Spearman correlation amongst women self-reporting abortions. We compare the mean perceived community stigma scores amongst women who self-reported abortions to those who did not, and scores amongst women who shared their self-reported abortions with their confidantes and those who did not using paired t-tests in Kenya. We also compared the mean scores for perceived community and individual attitude to abortion amongst women who reported abortions amongst their confidantes compared with those who did not using paired t-tests in Burkina Faso and Kenya. We used Stata 15.1 for the statistical analysis.

Results

The mean score for community condemnation amounts all respondents was higher in Burkina Faso (mean 4.4, SD 0.6) than in Kenya (mean 3.9, SD 0.9). In contrast, the mean score for individual attitudes towards women was higher in Kenya (mean 41.8, SD 9.2, range 22 to 61) than in Burkina Faso (mean 40.5, SD 9.4, range 16 to 63) and the individual stigma felt by abortion seekers was higher in Kenya (mean 3.2, SD 0.4) than in Burkina (mean 2.5, SD 0.6). The results of the Spearman correlation suggest that in Burkina Faso there was a positive correlation between community condemnation and individual attitudes to abortion ($r = 0.6945$, $p < 0.0001$), whilst there was no association in Kenya. There was also no significant association between community condemnation and internalized stigma in Burkina Faso or Kenya.

The mean community condemnation score was significantly lower amongst women who self-reported abortions (3.88) compared with those who did not report abortions (4.42) in Burkina Faso ($p=0.01$). There was no statistically significant different in Kenya although the scores showed a similar pattern as in Burkina Faso. In Kenya women who discussed their self-reported abortions with confidantes has

significantly lower internalized stigma scores than those who did not (3.09 vs 3.36, p =0.02), but no significant different in community condemnation scores. (Table 1)

Women who reported abortions amongst their confidantes had significantly lower community condemnation scores than those who did not in Burkina Faso (3.81 vs 4.32, p=0.04). There was no statistically significant difference between the scores in Kenya although they were in the same direction. There was no statistical difference between individual attitude to abortion scores amounts women who reported abortions in confidantes and those who did not in both Kenya and Burkina Faso. (Table 1)

Table 1: Comparing stigma scores amongst women who reported abortions (self-report and third-party reports) in two sites in Kenya and Burkina Faso

	Kenya						**Burkina Faso**					
Stigma domain	**Women who self-reported abortions** ***37 (36%)***		**Women who did not self-report abortions** ***65 (64%)***		**t-test results by self-report status**		**Women who self-reported abortions** ***9 (6%)***		**Women who did not self-report abortions** ***141 (94%)***		**t-test results by self-report status**	
	M	**SD**	**M**	**SD**	**t**	**p**	**M**	**SD**	**M**	**SD**	**t**	**P**
Community condemnation	3.80	1.02	4.00	0.74	-1.15	0.25	3.88	0.60	4.42	0.62	-2.52	0.01
	Kenya						**Burkina Faso**					
Stigma domain	**Women who reported abortions among confidantes** ***31(46%)***		**Women who did not report abortions among confidantes** ***36(54%)***		**t-test results by confidante report status**		**Women who reported abortions among confidantes** ***8(13%)***		**Women who did not report abortions among confidantes** ***55 (87%)***		**t-test results by confidantes report status**	
	M	**SD**	**M**	**SD**	**t**	**p**	**M**	**SD**	**M**	**SD**	**t**	**P**
Community condemnation	3.84	0.82	3.92	0.97	0.35	0.73	3.81	0.53	4.32	0.68	2.04	0.04
Individual attitude to abortion**	42.62	8.66	41.73	9.61	-0.31	0.75	35	3.93	39.32	8.26	1.45	0.15
	Kenya											
Stigma domain	**Women who discussed their self-reported abortions with confidantes** ***23(62%)***		**Women who did not discuss their self-reported abortions with confidantes** ***14(38%)***		**t-test results by sharing self-reported abortion status**							
	M	**SD**	**M**	**SD**	**t**	**p**						

Community condemnation	3.80	0.92	3.78	1.20	-0.05	0.96
Internalized stigma	3.09	0.32	3.36	0.36	2.36	0.02

** The SABAS scale to calculate this stigma score was only fielded amongst women who did not self-report abortions in the pilot, so this sample is a subset of the total N above it.

Discussion

Although the study populations in both sites were recruited differently, the non- random sample in Kenya provided an opportunity to recruit a large enough sample of women self-reporting abortions and reporting confidantes to examine their experiences of different stigma domains which was not possible in Burkina Faso. Our preliminary results suggest that respondents in Burkina Faso perceived their communities view of pregnancy termination is more conservative in than respondents in Kenya. This is unsurprising as semi-urban/rural Burkina Faso is often described as an extremely restrictive abortion context with limited access(17) compared with the highly urbanized Nairobi in Kenya where access to pregnancy termination appears easier even if it is not necessarily safe(18). On the contrary, women in the Kenyan sample had more stigmatizing individual attitudes towards women who report induced abortions than in Burkina Faso and women who self-report abortions reported greater internalized stigma in Kenya than in Burkina Faso. This may appear counter-intuitive considering the perceived stigma in each community but previous research from urban Burkina Faso proposes this phenomenon may occur when individual attitudes seem to become more conservative, despite the perception is that the communities attitude is more liberal because there is easier access to and uptake of abortion services .(19)

Although there were some differences between Burkina Faso and Kenya, our initial results suggest that there seems to be a positive relationship between greater perceived levels of community and internalized stigma and lower disclosure of induced abortions by respondents to the field interviewers and their confidantes respectively. Our data also suggest a similar positive relationship between perceived level of community stigma and third-party reports of abortions in confidantes. Although our data showed a strong correlation between community stigma and individual attitudes to induced abortions abortion in Burkina Faso there was surprisingly no positive relationship between individual attitudes to abortion and third-party reporting of induced abortions by respondents.

This study has multiple limitations. First, we did not have a random or population representative population in either site, so our results are non-generalizable to either site or the broader context. Second, we did not check if the stigma scales used were valid for either of these contexts and we made slight modifications to them based on the study teams impressions without on-site validation. Third, we did not ask respondents who self-reported induced abortions the SABAS questions and so could not examine their individual attitudes to women who have had abortions. This precludes us from comparing their stigma scores on this domain to other respondents in the sample and on their third-party reporting data. Fourth, our sample of women who self-reported abortions were relatively small in Kenya and too small in Burkina Faso to disaggregate and compare results like we did in Kenya.

Despite these limitations our preliminary results suggests that different domains of stigma have a significant impact on both respondent's self-report and third-party reporting of induced abortions. This supports what researchers have long hypothesized about stigma and abortion reporting. These abortion scales will be validated and fielded in the full-scale study amongst a representative sample of the population within the sites for us to compare with these pilot results, and to explore more in-depth the correlation between different domains of stigma, how women's socio-demographic characteristics interact with their experience of different stigma domains and their reports of abortion. Exploring how stigma affects reporting especially for studies implementing third-party reporting approaches may provide additional data to fine-tune statistical adjustments for incomplete transmission of information within social networks.

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