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Family Planning Dynamics In Zimbabwe

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Heidi Weidele B.S. Health Studies

INTRODUCTION

Almost 90 percent of all women in Zimbabwe lack health insurance(Zimbabwe,268). Most are undereducated or underemployed, and only have access to maternal and contraceptive care via public clinics. Since 2008, the health climate in the country has declined socially, economically, and structurally; there are only 1.6 physicians for every 10,000 people in Zimbabwe as of 2010 (WHO,1).There is a large lack of family planning services in both rural and urban areas, which could lead to unintended pregnancies and induced terminations. Particularly, women who do not use modern forms of contraception, have fewer assets, less education, and live in rural areas are more susceptible to having unplanned pregnancies (Clements,2). In 2014, 52% of women in Zimbabwe with unplanned pregnancies did not usually use any form of birth control (McCoy,6). Instead of carrying out the unintended pregnancies, many of these women induce terminations at home or in unsafe facilities due to lack of access to proper services (Johnson,3).This gap could be bridged, which would fulfill the needs for contraception and consultation access, and decrease the prevalence of induced terminations within the population. I chose to analyze demographic and family planning related data in order to determine whether there was unmet need for these services within the country, what gaps existed in the current healthcare, and how best to address these gaps to provide better family planning services to women in need. To guide my analysis, I hypothesize that *women who live in rural areas are more likely to have unmet need- Women with limited contraception are more likely to have induced terminations.*

METHODS

I analyzed data collected by the Zimbabwe National Statistics Agency and compiled by the United States Demographic and Health Surveys Program (Zimbabwe Demographic and Health Survey 2015) which I obtained from the DHS website. This survey included 9,955 women aged 15-49 and measured numerous risk behaviors and demographics throughout the entire country. I used IBM SPSS Statistics 24 software to analyze the raw data provided. My analyses included bivariate and multivariate analyses of multiple variables to have a better idea of what characteristics are associated with unmet need (age, living arrangement, highest education attained, wealth quintile, fertility preference, terminated pregnancy, knowledge and use of contraception, source of family planning services, use of family planning facilities, unmet need). Variables were recoded, and entered into bivariate logistic regression; the first regression sets with unmet need as the dependent variable and the second with termination of pregnancy as the dependent variable. Significant data was determined by p values <0.05 with CI of 95% or higher. Relationships among variables were examined using odds ratios produced within the regression.

RESULTS

Table 1. Demographics

Demographic	N	% or Average	Demographic	N	% or Average
Urban	4521	45.41%	Poorest	1499	15.06%
Rural	5434	54.59%	Poorer	1452	14.59%
Terminated Pregnancy	1148	11.53%	Middle	1549	15.56%
Used Birth Control	6824	68.55%	Richer	2558	25.70%
No Education	106	1.06%	Richest	2897	29.10%
Primary Education	2385	23.96%	Age 15-19	2156	21.66%
Secondary Education	6637	66.67%	Age 20-24	1782	17.90%
Higher Education	827	8.31%	Age 25-29	1656	16.63%
Used Public Services	5382	54.06%	Age 30-34	1591	15.98%
Unwanted Pregnancy	3475	34.91%	Age 35-39	1209	12.14%
Has Unmet Need	786	7.90%	Age 40-44	966	9.70%
Visited Facility in Last Year	5382	54.06%	Age 45-49	595	5.98%

Table 2. Bivariate Analyses

	DV= Unmet Need				DV= Terminated Pregnancy			
Variable	P Value	Odds Ratio	Lower	Upper	P Value	Odds Ratio	Lower	Upper
Age 15-19	0.002	0.482	0.303	0.768	0.000	0.105	0.076	0.146
Age 20-24	0.000	0.208	0.132	0.327	0.000	0.325	0.250	0.424
Age 25-29	0.000	0.204	0.129	0.321	0.000	0.527	0.411	0.675
Age 30-34	0.000	0.208	0.132	0.328	0.000	0.629	0.492	0.803
Age 35-39	0.000	0.289	0.18	0.462	0.36	0.891	0.697	1.14
Age 40-44	0.01	0.516	0.312	0.853	0.514	0.918	0.711	1.186
Age 45-49	-	1	-	-		1	-	-
Visited Facility Last Year	0.009	0.847	0.747	0.96	0.000	1.774	1.559	2.018
Did Not Visit Facility	-	1	-	-		1	-	-
Want Child w.i. 2 Years	0.000	0.009	0.001	0.068	0.000	5.673	3.479	9.252
Want Child After 2 Years	0.013	0.082	0.011	0.589	0.002	2.131	1.311	3.464
Unsure When Want Child	0.517	0.499	0.061	4.089	0.006	2.352	1.285	4.304
Undecided	0.007	0.064	0.009	0.469	0.000	4.941	3.059	7.980
No More Children	0.066	0.157	0.22	1.132	0.000	4.339	1.918	9.814
Sterile		-	NA	--	0.000	4.373	2.246	8.515
Infecund	-	1	-	-		1	-	-
Want Another Child	0.000	0.231	0.193	0.276	0.000	0.577	0.508	6.550
Undecided	0.000	0.405	0.276	0.593	0.000	0.476	0.322	0.703
Sterilized		-	NA	--	0.705	0.878	0.448	1.722
Infecund	0.066	6.361	0.884	45.778	0.619	0.885	0.547	1.432
Do Not Want More	-	1	-	-		1	-	-
Use Calendar Birth Control	0.057	0.781	0.606	1.007	0.000	3.902	2.974	5.121
Use Non Calendar	0.000	1.846	1.621	2.103	0.000	2.455	2.084	2.891
Does Not Use BC	-	1	-	-		1	-	-
Know Traditional BC	0.018	0.047	0.004	0.589	1	1	0.000	-
Know Modern BC	0.445	0.738	0.339	1.603	-	NA	--	
Do Not Know Of BC	-	1	-	-		1	-	-
Wanted Child In Past	0.997	0.000	0	0	0.273	0.684	0.346	1.350
Want Child Later	1	1	0	0	0.001	0.232	0.099	0.543
Did Not Want Child	-	1	-	-		1	-	-
Poorest	0.000	0.679	0.556	0.829	0.003	1.338	1.105	1.619
Poorer	0.000	0.589	0.484	0.716	0.01	1.292	1.604	1.570
Middle	0.001	0.718	0.588	0.877	0.206	1.135	0.933	1.382
Richer	0.001	0.750	0.628	0.894	0.401	1.077	0.906	1.279
Richest	-	1	-	-		1	-	-
No Education	0.529	1.276	0.598	2.721	0.613	1.174	0.631	2.184
Primary Education	0.003	0.670	0.516	0.869	0.002	1.478	1.154	1.894
Secondary Education	0.201	0.852	0.666	1.089	0.828	0.974	0.771	1.232
Higher Education	-	1	-	-		1	-	-
Rural	0.000	0.711	0.626	0.807	0.008	1.185	1.046	1.342
Urban	-	1	-	-		1	-	-
Terminated Pregnancy	0.000	0.442	0.377	0.579	-	-	-	-
No Terminated Pregnancy	-	1	-	-		1	-	-
Unmet Need	-	-	-	-	0.000	0.442	0.377	0.519
Met Need	-	1	-	-		1	-	-

Table 3. Multivariate Analyses

	DV= Unmet Need				DV= Terminated Pregnancy			
Variable	P Value	Odds Ratio	Lower	Upper	P Value	Odds Ratio	Lower	Upper
Age 15-19		-	NA	--		-	NA	--
Age 20-24		-	NA	-		-	NA	--
Age 25-29		-	NA	-		-	NA	--
Age 30-34		-	NA	-		-	NA	--
Age 35-39		-	NA	-		-	NA	--
Age 40-44		-	NA	-		-	NA	--
Age 45-49	-		1	-		-	1	-
Visited Facility Last Year	0.822		0.890	0.322	2.461	0.058	0.627	0.387	1.017
Did Not Visit Facility	-		1	-	-		1	-	-
Want Child w.i. 2 Years	0.514		3.378	0.087	130.468	0.851	1.257	0.115	13.714
Want Child After 2 Years	0.960		1.090	0.038	31.481	0.839	1.25	0.144	10.822
Unsure When Want Child									
Undecided	0.224		0.221	0.019	2.523	1	1	0.387	2.581
No More Children									
Sterile									
Infecund	-		1	-	-		1	-	-
Want Another Child	0.593		0.383	0.011	13.017	0.844	1.249	0.136	11.448
Undecided									
Sterilized									
Infecund									
Do Not Want More	-		1	-	-		1	-	-
Use Calendar Birth Control	0.397		1.755	0.477	6.452	0.077	1.796	0.939	3.435
Use Non Calendar	0.784		1.388	0.133	14.546	0.580	1.413	0.415	4804
Does Not Use BC	-		1	-	-		1	-	-
Know Traditional BC	1		0.000	0.000	-	1	0.251	0.000	-
Know Modern BC	0.040		0.016	0.000	0.831	0.999	NA	0.000	-
Do Not Know Of BC	-		1	-	-		1	-	-
Wanted Child In past	0.995		0.000	0.000	-	0.044	0.181	0.034	0.953
Want Child Later	1		0.000	0.000	-	0.001	0.184	0.070	0.484
Did Not Want Child	-		1	-	-		1	-	-
Poorest	0.138		0.167	0.016	1.777	0.020	0.281	0.097	0.816
Poorer	0.499		0.489	0.061	3.889	0.031	0.311	0.108	0.899
Middle	0.179		0.2	0.019	2.090	0.020	0.272	0.091	0.811
Richer	0.276		0.456	0.111	1.873	0.141	0.602	0.307	1.182
Richest	-		1	-	-		1	-	-
No Education	0.995		0.000	0.000	-	0.718	0.638	0.056	7.311
Primary Education	0.458		2.128	0.290	15.608	0.436	1.521	0.529	4.369
Secondary Education	0.841		1.198	0.205	7.017	0.488	1.395	0.545	3.570
Higher Education	-		1	-	-		1	-	-
Rural	0.680		1.429	0.263	7.774	0.182	1.715	0.777	3.785
Urban	-		1	-	-		1	-	-
Terminated Pregnancy	0.146		0.322	0.070	1.482	-	-	-	-
No Terminated Pregnancy	-		1	-	-		1	-	-
Unmet Need	-	-	-	-		0.140	0.323	0.072	1.449
Met Need	-		1	-	-		1	-	-

Bivariate Analysis
Predicting Unmet Need:

- Age 15-19 52% less likely to have unmet need than women aged 45-49
- Those who visited a health facility in the last year were 16% less likely to have unmet need
- Women taking non calendar bound birth control were 84 % MORE likely to have unmet need than women not taking any birth control
- Women in rural areas were 29% less likely to have unmet need than women in urban areas
- Poorest women are 32% less likely to have unmet need than the richest
- Women with induced terminations were 56% less likely to have unmet need

Predicting Terminations:

- Age 15-19 were 90% less likely to have terminations than women 45-49
- Those who visited a health facility in the last year were 77% more likely
- Women who did not want any more children were four times more likely
- Women using non calendar birth control were two times more likely to have terminations, while women taking calendar based birth control were four times more likely
- The poorest women were 33% more likely to have terminations
- Women in rural areas were 19% more likely to have terminations

- Multivariate Analysis:

Predicting Unmet Need:

- Women who know modern birth control methods were almost 99% less likely to have unmet need than those who did not know any birth control methods

Predicting Terminations:

- More wealth and wanting more children were the only significant indicators.
- Women who want children later were 82% less likely to have a terminated pregnancy.
- Women in the poorest wealth quintile were 72% less likely to have terminations than the richest
- Poorer women were 69% less likely
- Women in the middle quintile were 73% less likely.

DISCUSSION

- I hypothesized *women who live in rural areas are more likely to have unmet need- Women with limited contraception are more likely to have induced terminations.*
- I had expected to find results that clearly indicated that there was a large response for unmet need within this population, most of it within the poorest populations who did not use contraception.

- I actually found in the bivariate analysis that unmet need for healthcare services was more common among
  - Older women
  - Women using calendar bound birth control (rather than those using none at all)
  - Those living in urban areas
  - The richest women
  - Those who did not have induced terminations
- This discrepancy could exist if
  - Older women have more or atypical needs that clinics do not have the resources to help
  - A response bias existed
  - Women did not realize they had more health needs than they thought
  - Calendar bound birth control methods were not being followed correctly, or those types of birth control were not as readily available

- Induced terminations were more likely in women who
  - Were older
  - Visited health facilities in the last year
  - Take birth control
- These discrepancies could be due to
  - Younger women being more willing to take care of children, thus not terminating unwanted pregnancies
  - Women visiting facilities because they had unwanted pregnancies
  - Women taking birth control after they already experienced a termination

- When combining all of the predictor variables, the multivariate analysis indicated that the only significant factors were
  - Being knowledgeable about birth control methods , which made women less likely to have unmet need
  - Wanting children later and being less wealthy, which made women less likely to have induced terminations

- Based on the multivariate analysis it can be stated that place of residence is not a determining factor for unmet need, and having less access to contraception did not determine induced terminations in the grand scheme.

- The outcome of the regressions were not as they were planned to be. I had multiple variables (such as age in my multivariate regression) produce unexpected numbers that did not seem reasonable for the data set. I had other values (such as that of planned fertility) that produced no values at all. These errors could be due to an error in the way the regression was run, or how the DHS data was collected and organized.

- The limitations of my study were that I was unable to do further, more complex statistical analyses based on my time frame and skill level that would allow me to see more detailed relationships among my variables and draw more concrete conclusions.

- In the future, the impact of the types of services offered in public and private offices should be studied, and data should be collected as to what is offered to patients in order to make a more detailed recommendation and determine what other gaps exist in public health care in rural areas.

- Based on this study, the best way to serve these populations is to simply educate women about birth control methods. This would reduce the risk of women having unmet family planning needs, as well as needing induced terminations in the future.

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