ANC Knowledge, Self-efficacy and Intent to Seek Care During Pregnancy Among Married Adolescents in Northern Nigeria

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Background:

Pregnancy remains common among adolescent girls living in low- and middle-income countries (WHO, 2023). Pregnancies are concentrated among married adolescents who, although they face higher risk of pregnancy complications than older women, often have the lowest uptake of ANC (Ganchimeg et al., 2014). In Nigeria, 37% of adolescents under the age of 20 have begun childbearing, with just 57.4% receiving antenatal care from a skilled provider, compared to 69.3% of women aged 20-34 (National Population Commission (NPC) C ICF, 2019). Rates of health facility delivery are also lower, with 28.6% of pregnant women under age 20 delivering at a health facility, compared to 41.5% of women 20-34 (National Population Commission (NPC) C ICF, 2019). While lower access to maternal health services by adolescents is well-documented, there is still much that is unknown about the barriers these girls face to accessing care and the appropriate ways reach them (Sabet et al., 2023). Understanding current knowledge and perceptions of pregnancy and ANC among this audience can help shape more effective interventions for this audience. This paper looks at levels of knowledge, self-efficacy, and intent to seek care among married adolescents aged 15-19 in northern Nigeria.

Methods:

This paper analyzes data collected for a baseline study to assess the effectiveness of an intervention to improve care-seeking behavior during pregnancy for married adolescents in two states in northern Nigeria (Kaduna and Jigawa). Married adolescent girls between the ages of 15-19 were eligible for participation in the study if they were either pregnant (less than 24 weeks gestation) or at risk of becoming pregnant (not using a contraceptive method at the time of the survey with or without the intent to conceive). The sample was intentionally weighted to include more pregnant adolescents, with a target of 75% of all respondents currently pregnant. All participants were recruited through trained mobilizers, screened for eligibility, informed about the objectives of the study, and provided written consent to participate. An interviewer administered questionnaire was fielded by trained female enumerators in safe spaces at the communities where the participants resided. The questionnaire captured participants' socio-demographic details, and specific measures for the key outcomes for this study. Knowledge of early signs and danger signs were measured using an open ended question allowing participants to exhaustively list as many signs as possible. Enumerators selected the signs that closely matched pre-coded signs in the survey tool. Good knowledge was defined as knowing 3 or more signs. Self-efficacy to pursue behaviors for a healthy pregnancy was measured by asking participants the degree to which they agreed with the statements "*There are things I can do during my pregnancy to help make sure my child is born healthy"* and *"I am confident in my ability to take actions to support a healthy pregnancy."* Intention to attend ANC was measured differently for pregnant and non-pregnant girls. Non-pregnant girls were asked: "*Imagine you found out you were pregnant. How likely would you be*

to attend the services for pregnant women (ANC).” Responses very likely and quite likely were coded as “likely.” Pregnant girls were asked the binary question, “*Do you intend to access care from the health facility for your current pregnancy?*”

Data was collected using the Computer Assisted Personal Interview (CAPI) approach using the offline android application of the Open Data Kit (ODK) platform. All survey tools were translated from English into the local language (Hausa) and back-translated to ensure accuracy. Current analysis is restricted to descriptive analysis of baseline findings. If accepted, the authors would perform additional regression analysis to identify any significant correlates to key outcomes by demographic factors (including prior pregnancy status).

Results:

The total number of survey participants was 1,168 with an average age of 17.9 years. As anticipated, three quarters (74.2%, n=867) were pregnant at the time of the survey and, of those, the mean gestational age was 15.7 weeks or early second trimester. The majority of pregnant participants reported that they had wanted to become pregnant at the time they conceived (78.4%, n=634) and among non-pregnant girls, most reported wanting to become pregnant now (81.0%, n=239). Most participants were in a monogamous marriage (85.6%, n=1000), out of school (85.1%, n=994), and Muslim (92.6%, n=1,081). Approximately two-thirds of participants came from deprived households (68.7%, n=802). About a third of participants had been pregnant before (34.9%, n=407). Among this sub-set of participants, three-quarters (78.8%, n=316) had a live birth and average age at first birth was 16.1. ANC attendance was very low, with just 15.2% (n=48) reporting any ANC attendance and the majority gave birth at home (84.5%, n=267) (Table 1).

Less than a quarter of participants had good knowledge of the early signs of pregnancy (23.2%, n=257), defined as knowing three or more signs. The most commons signs listed were morning sickness (40.6%, n=474) and fatigue (31.7%, n=370). Just over one in ten (11.8%, n=131) had good knowledge of danger signs during pregnancy, with the mean number of danger signs identified being 1.2. The most recognized danger sign was vaginal bleeding, identified by just over a third of participants (34.6%, n=404). Most participants reported that, if or when they became pregnant, they had the self-efficacy to pursue behaviors for a healthy pregnancy (83.3%, n=954). Two-thirds (66.4%, n=576) of pregnant participants indicated that they intended to seek care from a health facility for their current pregnancy. Non-pregnant girls followed a similar trend, with about two-thirds reporting they would be likely to attend ANC services once pregnant (63.4%, n=168). (Table 2).

Table 1: Participant characteristics

Age cohort	
15-17	319 (27.3%)
18-19	849 (72.7%)
Pregnancy status	
Pregnant	867 (74.2%)
Timing of current pregnancy (pregnant girls only)	

Wanted to become pregnant then	634 (78.2%)
Wanted to wait until later	173 (21.3%)
Did not want to have any more children	4 (0.5%)
Intention to conceive	
(non-pregnant girls)	
Yes	239 (81.0%)
Gestational age for pregnant participants (weeks) – mean (SD) [n=867]	15.7 (5.6)
Type of marriage	
Monogamous	1,000 (85.6%)
Polygamous	168 (14.4%)
Schooling – currently in school	
No	994 (85.1%)
Not in school – highest level attained	
None	108 (62.1%)
Primary/Secondary	161 (16.2%)
Higher	184 (18.5%)
Islamiya or other school	536 (53.9%)
Religion	
Christianity	87 (7.4%)
Islam	1,081 (92.6%)
Participants from deprived households	
Yes	357 (65.3%)
Previous pregnancy (current pregnancy excluded)	
Yes	407 (34.9%)
Live Birth	
Yes	316 (78.8%)
ANC attendance for last birth	
Yes	48 (15.2%)
Place of birth	
Home	267 (84.5%)
Health Facility	49 (15.5%)

Table 2: Knowledge, self-efficacy, and intent to seek ANC

Level of knowledge of early signs of pregnancy	
Poor knowledge	849 (76.8%)
Good knowledge	257 (23.2%)
Number of early signs of pregnancy identified	
Mean (SD)	1.9 (0.9)
Median (interquartile)	2.0 (1.0, 2.0)
Early signs that a woman is pregnant	
Missed Period	914 (78.3%)
Morning Sickness	474 (40.6%)
Fatigue	370 (31.7%)
Other (specify)	203 (17.4%)
Frequent Urination	127 (10.9%)
Breast Soreness	81 (6.9%)
No response	4 (0.3%)
Level of knowledge of danger signs of pregnancy	
Poor knowledge	975 (88.2%)
Good knowledge	131 (11.8%)
Mean number of danger signs identified	
Mean (SD)	1.2 (1.5)
Median (interquartile)	1.0 (0.0, 2.0)
Danger signs that something is not right during pregnancy	
Vaginal bleeding	404 (34.6%)
Fever and weakness	231 (19.8%)
Severe abdominal pain	225 (19.3%)
Severe headache	137 (11.7%)
Convulsions / fits	105 (9.0%)
Swelling of fingers, face, or legs	81 (6.9%)
Fast or difficult breathing	45 (3.9%)
No/Inappropriate fetal movement	37 (3.2%)
Blurred vision	35 (3.0%)
Vaginal discharge	5 (0.4%)
Labour delay	1 (0.1%)

Self-efficacy to pursue behaviors for a healthy pregnancy	
Disagree	191 (16.7%)
Agree	954 (83.3%)
Likelihood to attend ANC for future pregnancy (among non-pregnant participants)	
Likely	191 (63.4%)
Intention to access care from the health facility for current pregnancy (among pregnant participants)	
Yes	576 (66.4%)

Discussion:

These data offer a snapshot of the background characteristics and knowledge, self-efficacy, and intent to seek care among married adolescents aged 15-19 who are currently or are at-risk of becoming pregnant in norther Nigeria. Among this cohort pregnancy is highly desired. However, this does not mean that adolescent girls are prepared to pursue a healthy pregnancy. Use of ANC during past pregnancies is low and rates of how birth are high. Knowledge is low for both early signs of pregnancy, which leads to delayed initiation of care, and on danger signs during pregnancy, increasing the risk of an untreated obstetric emergency. Interestingly, married adolescent girls are optimistic that they can pursue behaviors for a healthy pregnancy and the majority indicate that they intend to access ANC. This suggests that the will to act in the way that benefits their health, and the health of their child is present, but that adolescent clients need help overcoming the known barriers to accessing care, such as distance, cost, resistance to partners, and better access to health information.

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