GENDER DIFFERENCE IN INTENTION TO HAVE A CHILD AND ITS PREDICTORS AMONG HIGH SCHOOL ADOLESCENTS IN HAWASSA CITY, SOUTHERN ETHIOPIA: USING A THEORY OF PLANNED BEHAVIOR MODEL

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ABSTRACT

BACKGROUND: Adolescent pregnancy is a public health concern worldwide. In developing world, onethird to one-half of women becomes mothers within 19 years of age. In Ethiopia, teenage pregnancies and deliveries is common, which has been associated with consequences including school dropout, high infant and maternal mortality and morbidity.

OBJECTIVE: To determine gender difference in intention to have a child and its predictors among high school adolescents in Hawassa City, Southern Ethiopia from February to March 2015.

METHODS: A comparative cross-sectional study was conducted in selected high schools of Hawassa City. Eight hundred sixteen adolescents were enrolled in the study using stratified sampling technique. Data were collected by using self-administered questionnaire. The collected data were entered and analyzed using Epi-data version 3.1 and statistical package for social science version 20 statistical software respectively. Multivariable linear regression model was used to compare intention to have a child by gender and other predictors.

RESULT: Eight hundred seven adolescents participated in the study making the response rate of 98.8%. More than half of the respondents 470(58.5%) were in the age category of 15-17 years and 403(49.9%) of them were female. The proportion of adolescents who had desire to have a child before 20 years of age was 56(6.9%). Attitude (β =0.165, p<0.001), subjective norm (β = 0.408, p<0.001) and perceived behavioral control (β =0.168, p<<0.001) were significantly associated with intention to have a child. Being female (β = 0.0.021, p< 0.048), age group of 18-19 years (β = 0.0.041, p=0.021) and having low school performance (β =0.064, p=0.038) increases the intention. While in grade 12th adolescent students (β =- 0.034, p=0.03) and for those having good knowledge about family planning, pregnancy and related complications (β =-0.109, p=0.002) the intention to have a child decreases significantly.

CONCLUSION: There was a gender difference in intention to have a child. Females had more intention than males. The theory of planned behavior variables was found to be significant predictors of intention to have a child. While working to control adolescent pregnancy, focus should also be given to their referents and changing their perception of on the understanding of their controlling ability.

KEY WORDS: Adolescent Pregnancy, Intention to have a Child, a theory of planned behavior mode, Southern Ethiopia

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INTRODUCTION

Adolescent between 10-19 years of age accounted for 1.2 billion of the world's population and nearly 90% of them live in the developing countries1. Adolescent population in Ethiopia was estimated to be 24% of the total population². Adolescence represents a key stage in development and a critical opportunity for ensuring successful transition to adulthood. Poor sexual and reproductive health outcomes can often be traced to adolescence, when most people become sexually active3. During adolescence, many young people begin to experiment with new roles and one important area of exploration is sexual activity, which involves a risktaking behavior4. Educational achievement, life skills and decision-making around sexual behavior and childbearing have profound effects on the lives of adolescents as well as their families, communities and society5.

Adolescent pregnancy is among a major public health concern. Globally, about 16 million adolescent girls aged 15-19 give birth each year accounting for 11% of all births worldwide and almost 95% of these births occur in developing countries. Data from 51 developing countries showed that almost 10% of girls were mothers by age 16 years, with the highest rates in sub-Saharan Africa and South-Central and South-Eastern Asia6. In Ethiopia, a nationally representative Demographic and Health Survey (DHS) report revealed that 12 % of adolescent girls aged 15-19 years have already started childbearing, 10 % have had a live birth, and 2 % are pregnant with their first child. While only 1 % of adolescent girls aged 15 have started childbearing, 34% of women either are mothers or are pregnant with their first child by age 19 years. Among regions of Ethiopia, the percentage of adolescent girls' age 15-19 years who have begun childbearing varies from 3 % in Addis Ababa, 8 % in SNNPR to 21 % in Gambela7. Studies conducted among schoolgirls also indicated the teenage pregnancy of 7.7% in Arbaminch town8 and 18.4% in Huruta Town of Arsi Zone 9. Based on the finding of the studies conducted among women reproductive age group, 10.4% from Aysaita district of Afar region, 43.7% from Bench Maji zone of Southern Region and 56.9 from Arsi Zone of South-East Ethiopia were pregnant before the age of twenty10-12. Adolescents are at the increased risk to die during pregnancy or childbirth; they are also exposed to unsafe abortions, for increased child mortality and to give birth low birth weight babies who are at risk of malnutrition and poor development6, 13-15.

Despite the fact that 96% of births or pregnancies among women with age below 20 years were wanted either of at pregnancy, birth or later time in Ethiopia7, little is known about its predictor factors employing the scientifically sound modeling techniques and gender difference in intention to have a child is not also adequately studied in Ethiopian context. Most of the available studies focused on females but males are also a part of development process and share their own role for the occurrences of pregnancy. This study was therefore conducted with the objective of determining the difference of adolescent boys and girls in intention of having a child and the potential associated factors.

METHODS AND MATERIALS

Study Design and Setting:

An institution based comparative cross-sectional study design was used in the study. The data were collected from February to March 2015 in all high schools providing grade 9 to 12 academic program in Hawassa City. The city is a capital city of Southern Nations, Nationalities, and People Region (SNNPR) of Ethiopia located 273 km away from the national capital city Addis Ababa. In the City, there were 54,677 adolescents of which, 29,227 were females and 25,450 were males.

As per the report of Hawassa City Administration Education Bureau, there were 19 functional secondary schools categorized in to three types of namely; Government (4), Private (13) and Missionary (2) schools based on their ownership. The schools were serving 18, 709 students (10,197 males and 8,512 females).of whom 16,724 students were adolescents (8,917 males and 7,807 females) with the age group of 10-19 years.

Population Studied, Sample Size and Sampling Procedure:

All adolescent students who were attending Secondary and Preparatory Schools (grade 9 to 12) in Hawassa City Administration during the academic year 2014/2015 were included in the study. The sample size was determined using two-population proportion formula employing open-epi statistical software by taking 50% (P1) for predicted intention value for females and 10% difference in predicted value of intention towards having a child was assumed 40% (P2). for males, with 95% confidence interval (CI), 80% power and 10% non-response with one to one female to male ratio. Accordingly, the calculated optimal sample size for the study was 816 (408 males and 408 females). The sample size was distributed for each school, grade level and classes in the school by using sex and grade stratified sampling procedure considering probability proportional to size techniques. To select the study participants from each class simple random sampling technique was employed using the registration document of the school.

Data Collection and Quality Control

The construction of the questionnaire for the study was according to the guidelines for the construction of theory of planned behavior questionnaire (16). Elicitation study was conducted with 25 students and 75% of the beliefs raised by the participants were included in the questioner. Other questions were adapted from EDHS 2005 tools and other behavioral researches. The format for the questionnaire consists of 107 items separated into eight domains. The first four domains were ascertained the behavioral intention, direct measure of attitude, subjective norms, and perceived behavioral control. The next three domains were focused on the indirect measures of attitude, subjective norms, and perceived behavioral control and the final section covers the socio-demographic information of the study subjects. Most of the questions were prepared based on a Likert Scale with scale ranging from one (strongly disagree) to five (strongly agree) where respondents were asked to indicate how strongly they agree or disagree. The questionnaire was first prepared in English, translated into the local language, Amharic, and back translated into English by a different language expert. The final questionnaire was pre-tested on 5% of the actual sample size and necessary corrections were made. Before the data collection, two-days training was given to the data collectors and supervisors. Supervisors and the principal investigator monitored the data collection process on a daily basis. Double data entry was done using Epi-data version 3.1. Data were analyzed by SPSS version 20. Descriptive statistics was computed for all variables according to their type. To assess the relationship among TPB (Theory of Planned Behavior) component and other selected variables partial Pearson's correlation and independent sample t-test was used. Multivariable linear regressions were used to compare intention to have child by sex and other predictor variables.

Ethical Considerations

Ethical clearance for the study was obtained from the Institutional Ethical Review Board of Jimma University. The nature of the study was fully explained to the study subjects and their parents if their age is below 18 years. After explaining the detail nature of the study, verbal informed consent was taken from each of the participants before the data collection. For those having their age below 18 years, written assent with the detail of information about the nature of the study were sent to parents for their approval one day prior to the actual data collection.

RESULT AND DISCUSSIONS

From 816 adolescents participated in the study, 807 of them properly filled and returned the questioner making the response rate of 98.8%. The majority of the respondents 470 (58.3%) were in the age category of 15-17 years. Four hundred four (50.1%) study subjects were males and 742 (92.0%) were unmarried.

The proportion of students whose religion were Protestant, and Orthodox accounted for 426 (52.7%) and 317(39.4%) respectively. Two hundred ninetynine (37.0%), were from grade 9, and 484(60.0%) were reported medium level as their school performance (Table 1).

Variable			Female No (%)	Total No (%)
Sex		404(50.1)	403(49.9)	807(100)
Age	12-15	36(4.5)	24(2.9)	60(7.4)
	15-17	207(25.7)	263(32.6)	470(58.3)
	18-19	161(19.9)	116(14.4)	277(34.3)
Marital status	Married	20(2.5)	25(3.1)	45(5.6)
	Unmarried	371(46)	371(46)	742(92.0)
	Others	13(1.6)	7(0.8)	20(2.4)
Religion	Protestant	215(26.6)	211(26.1)	426(52.7)
	Orthodox	153(19.0)	165(20.4)	317(39.4)
	Muslim	19(2.4)	20(2.5)	39(4.9)
	Others	17(2.1)	7(0.9)	24(3.0)
Grade	Grade 9	144(17.8)	155(19.2)	299(37.0)
	Grade 10	136(16.9)	109(13.5)	245(30.4)
	Grade 11	59(7.3)	74(9.2)	133(16.5)
	Grade 12	65(8.05)	65(8.05)	130(16.1)
School performance	High level	125(15.5)	61(7.5)	186(23.0)
	Medium level	218(27)	266(33)	484(60.0)
	Low level	61(7.5)	76(9.5)	137(17.0)
Current place of	Hawassa city	374(46.3)	377(46.7)	751(93.0)
residence	Out of Hawassa city	30(3.7)	26(3.3)	56(7.0)

Table 1: Socio demographic Characteristics of high school Adolescents (n=807) in Hawassa City from February to March 2015

Among female study subjects, nearly half 180(44.7%) have good knowledge about family planning methods, pregnancy and its complication as measured by scoring above the mean values for a serious of eleven questions targeted for knowledge assessment.

While for male study subjects, having good knowledge accounted for 228(56.4%). Among the female adolescent students 20 (5.0%) had personal experience of pregnancy and 19(4.8%) personal experience of miscarriage, abortion or stillbirth. Male adolescent students were also asked about their experience regarding the occurrence of pregnancy and the related complication in their sexual partner if any. Accordingly, 45(11.1%) of them reported their previous experience of pregnancy in their sexual partners while 41(10.1) reported the occurrence of miscarriage, abortion or stillbirth in their sexual partners. About 112(13.9%) study subjects had a family history of having a child before 20 years and very few 44(5.5%) of the study subjects, had lost their family member because of pregnancy related complication (Table 2).

Table 2: Reproductive Health Knowledge and related Personal, Partner and Family History among high school Adolescents (N=807) in Hawassa City from February to March 2015

Variable		Male No (%)	FemaleNo (%)	Total No (%)
Knowledge on family planning, pregnancy	Good	228(56.4)	180(44.7)	408 (50.6)
and its complication	Poor	176(43.6)	223(55.3)	399(49.4)
Having personal experience of pregnancy	Yes		20(5.0)	20(5.0)
previously (For females only)	No		380(95.0)	380(95.0)
Having previous experience of pregnancy in	Yes	45(11.1)		45(11.1)
your sexual partners (For males only)	No	359(88.9)		359(88.9)
Having personal experience of miscarriage,	Yes		19(4.8)	19(4.8)
abortion or still birth (For females only)	No		381(95.2)	381(95.2)
Having previous experience of miscarriage,	Yes	41(10.1)		41(10.1)
abortion or still birth in your sexual	No	363(89.9)		363(89.9)
partners (For males only)				
Having family member who gave birth	Yes	64(7.9)	48(6.0)	112(13.9)
to a child before 20 years of age	No	340(42.1)	355(44.0)	695(86.1)
Having history of losing family member	Yes	23(2.9)	21(2.6)	44(5.5)
below 20 years of age due to complications	No	381(47.2)	382(47.3)	763(94.5)
of pregnancy				

The proportion of adolescents who had desire to have a child before 20 years of age was 56(6.9%). Partial correlation among variables of TPB and other variables including knowledge about family planning, pregnancy and related complications, and previous experience were undertaken. Accordingly, all TPB components correlated significantly and positively with behavioral intention. Subjective norm (r=0.485, p<0.25) demonstrated the highest correlation followed by perceived behavioral control (r=0.343, p<0.25) and attitude (r=.0.250, p<0.25). Previous experience (r= .0.032, p<0.25) and knowledge about family planning,

All factors including the direct measures of the model, the indirect measure of the model and those external to the model, which had significant association with the intention to have a child, were entered in to multiple linear regression models at a time. According to the standardized beta coefficient in the multiple regression model, from the direct measure of the model, attitude towards having a child (β =0.165, p<0.001), supportive subjective norm towards having a child (β = 0.408, p<0.001) and perceived behavioral control that indicate their perception of having a decision making power over having a child (β =0.168, p<0.001) were

pregnancy and related complications, (r=-0.255, p<0.25) were significantly and negatively correlated with behavioral intention (Table 3).

Table 3: Partial Correlation between Theory of Planned Behavior Model Components and Other Important Variables among high school Adolescents in Hawassa City from February to March 2015

Variables	1	2	3	4	5	6
Intention		0.250*	0.485*	0.343*	-0.032	-0.255
Attitude		-	-0.157	-0.114	0.033	0.194*
Subjective Norm	-	-	-	0.482*	-0.107	-0.118
Perceived Behavioral Control	-	-	-	-	-0.166	-0.107
Previous Experience	-	-	-	-	-	0.109
Knowledge about FP, pregnancy and its complications Significant less than 0.001 *	-	-	-	-	-	-

significantly associated with intention to have a child. Subjective norm demonstrated the highest potential predictor followed by perceived behavioral control and attitude. From the indirect measures of the model, outcome evaluation (β =0.151, p<0.001), normative belief (β =0.256, p<0.001), motivation to comply (β =0.081, p=0.03) and perceived control (β =0.098, p=0.003) were significantly associated with the intention to have a child. From factors external to the model sex, being female increase the intention to have a child (β = 0.0.021, p< 0.048). Being in the age group of 18-19 years (β = 0.0.041, p=0.021) and having low performance in school (β =0.064, p=0.038) increases the intention. The intension to have a child decreases among grade 12th adolescent students (β =- 0.034, p=0.03) and as the knowledge about family planning, pregnancy and related complications increases the intention to have a child will be decreased by (β =-0.109, p=0.002) (Table 4). The present study further found out that, the direct predictors of theory of planned behavior explained 30.5% of the variability in intention to have a child and when the direct predictors combined with the external variables of the model together, they explained 31.6% of the variability in intention to have a child.

This study applied an extended version of the TPB framework to explain the intended and actual desire of having a child among high school adolescents. The direct variables and variables that are external to the model explained 31.6% of the variance in intentions to have a child before 20 years of age. This result is in line with study conducted among female adolescent in Ethiopia, which showed that the theory explained 29% of the variance in their intention to use contraceptives17. As per the finding of another study conducted among Tanzanian teachers using TPB, the theory also explained 30% of the variance18.

The result of this study indicated that adolescent students' intention to have a child was primarily related to subjective norms and their perceived behavioral control. While attitude has less weight, it was still a significant predictor of the adolescent students' intention to have a child. This finding further showed that adolescents' intention to have a child depend on how they perceived the significant others thinking of them if they have a child before their age of 20 as normative actions and their perceived easy or difficulty associated with having a child before their 20 years of age. The founder of the theory pointed out that, the relative importance of attitude, subjective norms

Model	Standardized coefficients	t	Sig
	В		
Predictors of the intention to have a child			
from direct measures Constant		11.44	<0.001
Attitude towards having a child	0.165	5.574	<0.001
Subjective norms towards having a child	0.408	12.195	<0.001
Perceived Behavioral Control	0.168	5.043	<0.001
Predictors of the intention to have a			
child from measures Constant	11.568	000	
Behavioral belief	-0.042	-1.224	0.221
Outcome evaluation	0.151	4.461	<0.001
Normative belief	0.256	6.615	<0.001
Motivation to comply	0.081	2.168	0.03
Control belief	0.064	1.794	0.073
Perceived behavioral control	0.098	2.966	0.003
Predictors of the intention to have a child from ext	ernal variables		
Constant		5.937	000
Sex (Female)	0.021	2.701	0.048
Age (18-19)	0.041	3.240	0.021
Grade (12th Grade)	-0.034	1.029	0.03
Class (low level)	0.064	2.076	0.038
Knowledge (good)	-0.100	3.117	0.002

Table 4: Multiple Linear Regression Analysis of Theory of Planned Behavior Model Components and Other Important Variables among high school Adolescents in Hawassa City from February to March 2015

and perceived behavioral control in the prediction of intention is expected to vary across behavior and situation¹⁶.

Among the salient beliefs, the study group had strongly favorable outcome evaluation to have a child and perceive normative belief pressure positively. The finding of the study is consistent with a study conducted in South Africa where the intention of teenagers to have a child is more dependent on their positive and negative expectations of the outcomes of the behavior (intention to have a child). Their belief in the ability to exert control over their own behavior is also an important contributing factor for the intention 19.

Being female and age group of 18-19 years have significant association with intention to have a child during the period of adolescence. The finding goes in line with the finding of similar study conducted in Island that examined the intention to have a child with respect to age. The study found out that practical considerations associated with teen motherhood were most often identified by the oldest teens with the age of 18–19 years (20).

As the grade of the participants was advancing to 12th the intention to have a child showed reduction. When the finding is compared with study conducted in Ethiopia, where a strong inverse relationship between early childbearing and women's education were also evident; teenagers with less education were much more likely to have started childbearing than those having a better-educated7, 21. Having low performance in school was found to increase the adolescent students' intention to have a child. This could be related with the fact that, students with low school performance may assume that engaging in marriage and having a child could help them to settle in family business without risking their life for economic struggle, which is among the common practices in rural Ethiopian community.

CONCLUSION AND RECOMMENDATION

The study revealed nearly one-tenth of the respondents had an intention to have a child before their age of 20 years. It was further found out that, the direct variables of the model and variables that are external to the model explained 31.6% of the variance in intentions to have a child before 20 years of age. Among the TPB components, subjective norm is the highest potential predictor followed by perceived behavioral control and the attitude. Among factors that are external to the model sex, age, grade and school performance had association with intention to have a child. When comparing the behavioral intention to have a child between sex categories, females had more intention than males. When working on programs targeting for controlling adolescent pregnancy, attention should be paid on their referents such as partner, other family member, friends and religious leader. Focus should also be given to change the perception of adolescents on the understanding of their controlling ability, which could also have paramount benefit in reducing their intention to have a child.

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COMPETING INTEREST

The authors declare that there is no conflict of interest regarding the publication of this paper

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