

FACTORS INFLUENCING MARRIED YOUTHS' DECISIONS ON CONTRACEPTIVE USE IN A RURAL AREA OF MYANMAR

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Abstract. This study aimed to describe the factors influencing the decision of married female youth and their husbands measured by self-rating on the magnitude and importance of each factor and person, and agreement between willingness to use and actual contraceptive use. A community-based cross-sectional study was conducted in Ayeyarwaddy Division, Myanmar. The decision to use contraception increased significantly due to motivation from a provider, friends, spousal communication, and benefits of contraception by multiple logistic regression. Influencing factors which attained the magnitude of >50% and importance of >5 scores for their decision were a couple's attitude, spousal communication, pregnancy susceptibility, couple's knowledge, and benefit of contraception. A fair agreement was found between willingness to use and actual use.

INTRODUCTION

Youth, can be defined as persons between 15-24 years of age, which includes late adolescents (15-19 years) and young adults (20-24 years) (WHO, 1999). These two periods of youth are important because of transitional changes both in biological and psychological aspects. In developing countries, more than 60 percent of sexually active adolescent are married (Nugent, 2005). Most married youths are often pressured by their family and community to have their first child as soon as possible after marriage (Singh *et al.*, 2000; Population Reference Bureau, 2006). However, young girls have a

higher risk of delivering babies with low birth weight as well as premature delivery (Haldre *et al.*, 2007). Lack of contraceptive use is a major contributor to the high rates of unintended pregnancies and abortion observed worldwide for young adults (Munasinghe and van den Broek, 2005). Although the contraception is the most effective method to overcome this problem, the problem still exists and has not been solved in many countries, especially developing countries.

Globally, negative health consequences of pregnancy and unplanned pregnancy leading to abortion in the youths are contributing factors to a high maternal and perinatal mortality rate (Nugent, 2005). Likewise, in Myanmar, youth cover 20 percent of the population (Central Statistical Organization, 2002), and 41% of married women in the 15-19 year age group had already one or more births, according to Fertility and

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Reproductive Health Survey 2001 (Department of Population and UNFPA, 2003). In 2005, the national maternal mortality ratio (MMR) was 210 per 100,000 live births (Ministry of Health, 2006). One of the main causes of maternal mortality is abortion-related complications in which unsafe abortions account for approximately 50% of all maternal deaths. In addition, 20-30% of all maternal deaths are of women aged less than 25 years (Central Statistical Organization, 2000; Department of Health Planning, Myanmar, 1994). Even though contraceptive use is an important strategy to improve maternal and child health of married youths, contraceptive prevalence rate of married youth was only 32% (Department of Health Planning and UNFPA, 2005).

Previous studies have identified possible factors influencing contraceptive use, which include knowledge and attitude (WHO-HRP, 1997; Orji and Onwudiegwu, 2002), spousal communication (Kamau *et al*, 1996; Tawiah, 1997; Hogan *et al*, 1999), and perception, availability, and accessibility to contraceptive services (WHO-HRP, 1997; Orji and Onwudiegwu, 2002). There is little information on both influencing factors and persons related to the decision on contraceptive use using self-ranking, particularly among married female youths; moreover, there is no documentation concerning the magnitude and importance of factors using self-ranking of which we are aware. Therefore, this study considered all those possible factors to be tested for the influencing decision of married female youths on contraceptive use. The significant factors that were identified in this study, might help to point out the determinants to enhance targets contraceptive use among youths in the future.

Research objectives

This study aimed to describe the influencing factors and persons related to self-

rated contraceptive decision by married youths, and the agreement between willingness to use contraception and actual use.

Research questions

This study had two main research questions: "What are the influencing factors and persons related to contraceptive decision of married female youths, and "Was willingness to use correlated to the actual contraceptive use?"

MATERIALS AND METHODS

Study design and setting

A household cross-sectional survey was conducted in Ayeyarwaddy division of Myanmar. Ayeyarwaddy Division was purposely selected because the the most recent MMR was 300 per 100,000 live births (Ministry of Health, 2006), the second highest figure among all states and divisions of Myanmar. In this division, Hinthada Township was randomly selected as the study setting by a computer generated random number. Seventy percent of the population resides in rural areas of the township.

Ethical considerations

The study was approved by the Institute Ethics Committee of Faculty of Medicine, Prince of Songkla University, Hat Yai, Songkhla, Thailand Ref No. SUB.EC 51/ 354-004; 29 April 2008. A letter of permission was secured from Ministry of Health, Myanmar on 18 March 2008, before the study was conducted. An information sheet concerning the study was provided to the couple, and written informed consent was obtained.

Study subjects

Currently married female youths aged between 15-24 years and their husbands, who had resided for at least six months before the survey was conducted, were included in the study. Those with a desire to get pregnant or currently pregnant, not

willing to participate, or mentally challenged were excluded. The sample size was calculated based on a 20% difference of factors related to the decision on contraceptive use, a ratio of decision to use or non-use to be 1:1 and an 80% power to detect this difference. With these criteria, at least 98 couples for each group were needed.

Study variables

The main outcome measure was “contraceptive use,” which was defined as the continuing use of any modern contraceptive method for at least six months. The influential persons of interest related to the decision to use contraception were wife, husband, parents/in-laws, friends, and providers. “Factors” related to the wife’s decision to use contraception were classified as couple, service, and provider factors. “Couple” factors included knowledge, attitude, perception of pregnancy susceptibility, perception of benefits of contraception, and spousal communication. “Service” factors were availability of contraceptives and accessibility to service. “Provider” factors were attitude and motivation of provider. Respondents were asked whether each factor/person influenced their decision, and this was recorded as either “Yes” or “No.” The proportion of wives who answered “Yes” for each person and factor then defined the “magnitude of influence” for persons and factors. Consequently, all respondents were asked to rank those identified factors and persons according to the importance for their decision. The most important one was placed as the first rank, and the least important ranked as the last. A high rank described the “importance of influence” as it affected their decision.

Data collection

The couples were interviewed using a reliable, validated, structured questionnaire by well-trained interviewers. The wife and

husband were interviewed privately and separately at the same time. Analysis in this article focused on the data collected from the wives.

Data processing and analysis

Double data entry and validation was done using EpiData[®] software (version 3.1; EpiData Association, Denmark) and analyzed by R[®] software (version 2.7.1; R Foundation for Statistical Computing, Austria).

Descriptive statistics were shown as percentages for categorical variables and means (\pm SD) for continuous variables. The effect of magnitude of factors and persons to the decision on the use of contraception was analyzed by multiple logistic regression with a p-value of less than 0.05 deemed to be significant. The weighted ranking score was calculated in two steps. Firstly, the magnitude of each factor and person influencing a couple’s decision to use contraceptives was scored by assigning a score of “2” for “Yes” and a score of “1” for “No”. Secondly, the importance of factors was scored with the first rank assigned a score of “9” and the last rank was given “1.” The importance of persons was scored with the first rank assigned “5” and last rank given “1.” Consequently, the weighted ranking scores were calculated by multiplying the scored magnitude with the scored importance. A high weighted ranking score indicated a high influence of the factor/ person on the decision to use contraception. The agreements between willingness to use contraception and actual use, and between that of willingness to use between wives and husbands were determined by the kappa coefficient.

RESULTS

Two hundred twenty-two eligible couples were included in the study. The mean age of the wives was 21 years (range:

16-24 years) and that of their husbands was 25 years (range: 18-40 years). Almost all were Buddhists (97.7%), with the remaining being Christian (1.8%) and Muslim (0.5%). The distribution of education among wives and husbands was similar, and one-third of couples had completed primary school education. One-third of the women were housewives without having their own income. Almost all husbands were employed, of which 49.1% were farmers or running their own businesses. Duration of marriage ranged from 1 to 96 months (mean \pm SD 29.4 \pm 21.5). Of all couples, 60.4% had at least one child at the time of the interview. Of 222 couples, 110 couples said that they used contraceptives, while 112 couples said that they did not.

Fig 1 illustrates the magnitude and importance of influential persons and factors related to the decision of the wife to use contraception. The responses on magnitude and importance of influencing persons who have been ranked as high on importance also had a high magnitude, and a similar pattern was found for the influencing factors. Couple factors were the most important, followed by service factors and provider factors according to self-ranking of young wives.

The effect of magnitude of persons and factors to the decision on the use of contraception is shown in Table 1. There were four significant factors demonstrated in the final logistic regression model, namely, motivation from providers, involvement of friends, spousal communication, and perceived benefits of contraception.

Table 2 shows the association between the weighted ranking score for each factor and person, and the decision to use contraception. The weighted ranking scores of factors and persons influencing the decision were similar to the non-weighted results (Fig 1). Significantly higher weighted ranking scores of friends, spousal communication, and benefit of contraception were found in contraceptive users compared to non-users. Conversely, the ranking scored on couple's attitude was significantly higher in non-users.

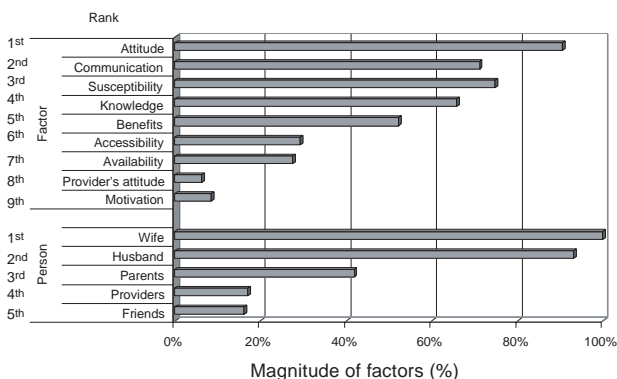


Fig 1-Ranking and magnitude of influencing factors on wives' decision to use contraceptives.

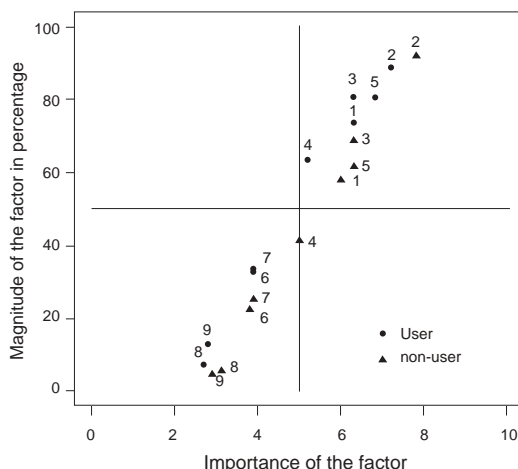


Fig 2-Magnitude and importance of the factors in users and non-users. 1, couple's knowledge; 2, couple's attitude; 3, perception on pregnancy susceptibility; 4, perception on benefits of contraception; 5, spousal communication; 6, availability of contraceptives; 7, accessibility to service; 8, provider's attitude; 9, motivation from provider

Fig 2-Magnitude and importance of the factors in users and non-users.

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The relationship between the magnitude and importance of influencing factors among contraceptive users and non-users is

Table 1
Prediction of contraceptive use by person/ factor involved in decision.

Person/ factor	Model 1 Adjusted OR (95% CI)	Final Model Adjusted OR (95% CI)
Person		
Spouse (Yes/No)	1.1 (0.3, 4.2)	
Parents/ in-law (Yes/No)	1.2 (0.6, 2.2)	
Provider(Yes/No)	0.5 (0.2, 1.2)	
Friends (Yes/No)	3.7 (1.4, 9.6)**	3.0 (1.3, 7.1)**
Factor		
Couple's knowledge (Yes/No)	1.4 (0.8, 2.7)	
Couple's attitude (Yes/No)	0.5 (0.2, 1.3)	
Pregnancy susceptibility (Yes/No)	1.9 (0.9, 3.9)	
Perceived benefits (Yes/No)	2.0 (1.1, 3.7) *	2.2 (1.2,3.8)**
Spousal communication (Yes/No)	2.2 (1.1, 4.6)*	2.4 (1.3,4.7)**
Availability (Yes/No)	1.3 (0.6, 2.8)	
Accessibility (Yes/No)	1.1 (0.5, 2.3)	
Provider attitude (Yes/No)	0.6 (0.1, 2.8)	
Motivation from provider (Yes/No)	7.1 (1.8, 27.7)**	4.0 (1.3,12.4)*

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; OR, odds ratio; CI, confidence interval

shown in Fig 2. The factors seen in the upper right quadrant indicate high magnitude and importance, and include couple's attitude, spousal communication, perception on pregnancy susceptibility, couple's knowledge, and perception on benefits of contraception. Couple's attitude was considered as the most important factor to both contraceptive users and non-users.

About two-third of the wives (66.7%) and more than half of the husbands (54.5%) were willing to use contraception regardless of their user status. Among non-users, about half were willing to use contraception (50.9% for wives and 42.9% for husbands). Moderate agreement was seen between wife's willingness and husband's willingness to use contraception with a kappa value of 0.4 ($p < 0.001$). Only fair agreement was detected between willingness and actual use for both wives and husbands with a kappa of 0.32

and 0.24, respectively ($p < 0.001$).

DISCUSSION

Our results indicate that motivation from a provider, involvement of friends, spousal communication, and perception of the benefits of contraception significantly increased the decision of young wives to use contraception in a rural area of Myanmar. Couple's attitude, spousal communication, perception on pregnancy susceptibility, couple's knowledge and perception on benefits of contraception were identified as having a higher magnitude and importance than service and provider factors. Couple's attitude was considered as the most important factor for both contraceptive users and non-users. Moderate agreement between wives' and husbands' willingness to use contraception, and fair agreement between willingness

Table 2
Association between weighted ranking score of the factors and the decision to use contraception.

Person or factor determined by wife	Weighted ranking score		p value
	User Mean (SD)	Non-user Mean (SD)	
Persons			
Wife	9.6 (0.8)	9.5 (0.9)	0.4
Husband	8.0 (1.4)	7.9 (1.7)	0.8
Parents/ in-law	4.2 (2.2)	3.8 (2.1)	0.2
Health providers	2.5 (1.5)	2.6 (1.4)	0.7
Friends	2.0 (1.5)	1.4 (0.9)	0.002
Factors			
Couple's attitude	14.0 (4.6)	15.1 (3.7)	0.03
Spousal communication	12.9 (5.1)	11.0 (5.7)	0.007
Pregnancy susceptibility	12.0 (5.1)	11.2 (5.5)	0.2
Couple's knowledge	11.8 (5.7)	10.3 (6.1)	0.06
Benefits of contraception	9.1 (5.0)	7.8 (5.3)	0.04
Availability of contraceptives	5.7 (4.6)	5.0 (4.1)	0.2
Accessibility to service	5.8 (4.7)	5.6 (4.9)	0.7
Provider's attitude	3.2 (2.8)	3.8 (2.8)	0.6
Motivation from health provider	3.5 (3.4)	3.1 (2.3)	0.3

to use contraception and actual use were found.

Among the factors related to the decision to use contraception, motivation from provider increased the chance of using contraception more than others did. Available literature on the role of providers suggested that married non-professional women experienced significant difficulties in using family planning services, largely due to communication problems with health providers (Hennink *et al*, 1998). In our study, involvement of friends in the decision of contraception significantly increased the contraceptive use of young wives. The social environment plays an important role in the health-related behavior of young people, including friends and peers, sexual partners, family members and the community (WHO, 1999). The impact of peers on reproductive and sexual

behavior of young people particularly has been documented to be strong (Ary *et al*, 1999; Staton *et al*, 2002).

Similarly, spousal communication was identified as an important related factor for the decision to use contraception. If spousal communication was reported by the woman as a factor included in her decision, there would be a higher chance to use contraception. Some studies have confirmed our findings of the effect of spousal communication on contraceptive use (Kamau *et al*, 1996; Tawiah, 1997; Hogan *et al*, 1999). Additionally, perception of the benefits of contraception could also influence a woman's decision to use contraceptives. Previous studies have also suggested that concerns about side effects from contraceptive use resulted in less use (WHO-HRP, 1997; Edwards *et al*, 2000; Orji and Onwudiegwu,

2002; Cheung and Free, 2005).

Regarding the importance and magnitude of each factor on the decision to use contraceptives, couple's attitude received the highest score, and both users and non-users consistently confirmed this, which is similar to the results of previous studies (WHO-HRP, 1997; Orji and Onwudiegwu, 2002). However, these studies collected data on attitudes to contraceptive use in only one dimension, not two dimensions, namely, magnitude and importance as in our study. Ranking priority and weighting of factors would better reflect the influence of factors in the decision, which was suggested by the consistent pattern of magnitude and importance (Fig 2). Spousal communication scored high but was different between users and non-users.

Only fair agreement between willingness to use contraceptives and actual use was found for both wives and husbands, and one-half of non-users were willing to use contraception. This finding suggested that some women in this study faced the problem of unmet needs on contraception, which was also reported in previous studies (Ross and Winfrey, 2002; Department of Population and UNFPA, 2003). This disagreement between the willingness and actual use and the issue of the husband's influence warrant further investigation in order to address this problem.

Our study used the self-rating assessment to determine the magnitude and importance of the persons and factors involved in the decision to use contraceptives among married couples. Transformation of rankings into weighted scores for the factors indicated the importance of each factor in relation to a woman's decision.

The main limitation of the study was the subjective nature of the self-rating response. We could not observe whether the factors

and persons identified by the participants were actually included in their decisions. However, we explained the objectives of the study thoroughly and let the participants think carefully about each factor and whether it had influenced their decision to overcome this limitation. In addition, we wrote down all persons and factors on small white cards and let the participants rank these by themselves.

In conclusion, couple's factors, especially perception of the benefits of contraception, as well as spousal communication, and motivation by peers and providers can be regarded as the important concerns in youths' decisions to use contraception. Our findings should lead to further research on the intensive promotion of the benefits of contraception, the role of the husband, and peer and provider's motivation on scaling up the contraceptive use among married youths.

ACKNOWLEDGEMENTS

This study was a part of the thesis of the first author to fulfill the requirement of the Master's degree on Epidemiology at Prince of Songkla University. Funding support for this study was provided by World Health Organization through special program of Research, Development, and Research Training in Human Reproduction (WHO/HRP). We wish to acknowledge the authorities from Ministry of Health, Myanmar for allowing us to conduct the study. Our sincere thanks are directed to the Township Medical Officer of Hinthada Township and research assistants from the Department of Medical Research (Lower Myanmar) for their kind help and cooperation in data collection. We are also grateful to all couples who participated in the study. We would like to thank Mr Edward McNeil for manuscript editing.

REFERENCES

- Ary DV, Duncan TE, Duncan SC, Hops H. Adolescent problem behaviour: the influence of parents and peers. *Behav Res Ther* 1999; 37: 217-30.
- Central Statistical Organization, Myanmar. National mortality survey 1999. Yangon: Ministry of National Planning and Economic Development, 2000.
- Central Statistical Organization, Myanmar. Statistical year book 2002. Yangon: Ministry of National Planning and Economic Development, 2002.
- Cheung E, Free C. Factors influencing young women's decision making regarding hormonal contraceptives: a qualitative study. *Contraception* 2005, 71: 426-31.
- Department of Health Planning, Myanmar. Maternal mortality survey, Yangon: Department of Health Planning, Myanmar Maternal and Child Welfare Association (MMCWA) and UNICEF, Myanmar, 1994.
- Department of Population, UNFPA. Myanmar fertility and reproductive health survey 2001: country report. Yangon: Ministry of Immigration and Population, 2003.
- Department of Health Planning, UNFPA. Myanmar reproductive health end of program community survey 2005. Yangon: Ministry of Health, Myanmar, 2005.
- Edwards JE, Oldman A, Smith L, McQuay HJ, Moore RA. Women's knowledge of, and attitudes to, contraceptive effectiveness and adverse health effects. *Br J Fam Plann* 2000; 26: 73-80.
- Haldre K, Rahu K, Karro H, Rahu M. Is a poor pregnancy outcome related to young maternal age? A study of teenagers in Estonia during the period of major socio-economic changes (from 1992 to 2002). *Eur J Obstet Gynecol Reprod Biol* 2007; 131: 45-51.
- Hennink M, Cooper P, Diamond I. Asian women's use of family planning services. *Br J Fam Plann* 1998; 24: 43-52.
- Hogan DP, Berhanu B, Hailemariam A. Household organization, women's autonomy, and contraceptive behavior in southern Ethiopia. *Stud Fam Plann* 1999; 30: 302-14.
- Kamau RK, Karanja J, Sekadde-Kigundu C, Ruminjo JK, Nichols D, Liku J. Barriers to contraceptive use in Kenya. *East Afr Med J* 1996; 73: 651-9.
- Ministry of Health, Myanmar. Annual public health statistics report, 2005. Nay Pyi Taw: Ministry of Health, 2006.
- Munasinghe S, van den Broek N. Abortions in adolescents. *Trop Doct* 2005; 35: 133-6.
- Nugent R. Population Reference Bureau. Youth in a global world. Washington, DC: PRB, 2005.
- Orji EO, Onwudiegwu U. Prevalence and determinants of contraceptive practice in a defined Nigerian population. *J Obstet Gynaecol* 2002; 22: 540-3.
- Population Reference Bureau. The world's youth 2006 data sheet. Washington, DC: PRB, 2006.
- Ross JA, Winfrey WL. Unmet need for contraception in the developing world and the former Soviet Union: an updated estimate. *Int Fam Plann Persp* 2002; 28: 138-43.
- Singh S, Wulf D, Samara R, Cuca YP. Gender differences in timing of first intercourse: data from 14 countries. *Int Fam Plan Perspect* 2000; 26: 21-8
- Staton B, Li X, Pack R, Cottrell L, Haris C, Burns JM. Longitudinal influence of perceptions of peer and parental factors on African American adolescent risk involvement. *J Urban Health* 2002; 79: 536-48.
- Tawiah EO. Factors affecting contraceptive use in Ghana. *J Biosoc Sci* 1997; 29: 141-9.
- WHO. The reproductive health of adolescents: a strategy for action. Geneva: WHO, 1989.
- WHO-HRP. Expanding options in reproductive health: an assessment of the contraceptive method mix in Myanmar. Yangon: WHO, 1997.
- WHO. Programming for adolescent health and development. Geneva: WHO, 1999.