

PARENTAL SUPPORT FOR SEXUAL AND REPRODUCTIVE HEALTH INFORMATION AND SERVICES FOR UNMARRIED YOUTH IN CHENGDU, CHINA

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Abstract. The objective of the study was to explore parental perspectives and attitudes towards the provision of sexual and reproductive health (SRH) information and services to unmarried youth in Chengdu, China. A representative sample of parents was drawn using multi-stage stratified cluster sampling technique, and information was collected using a structured questionnaire. The eligible respondents were parents (both fathers and mothers) who had at least one unmarried adolescent and/or youth aged 15 to 24 years old. A total of 2,871 fathers and mothers were interviewed. Parents' SRH-related knowledge was poor and dissonant attitudes of tolerance and ambivalence towards provision of SRH information and services to unmarried youth were found. About 80% of parents accepted and understood unmarried youth seeking SRH counseling service, but the percentages of such positive attitude was much lower for premarital contraceptive use. Over half of the parents were supportive of providing SRH education and information to unmarried youth; whereas on the provision of contraceptive services to sexually active unmarried youth, 27% were negative, 25% accepted, 36% indicated an understanding, and the rest 12% had no opinion. Parents' SRH-related knowledge and attitudes were associated with parental social-demographic characteristics. Findings from this study suggest that parent-oriented programs are needed to apprise them of the existing SRH conditions of the unmarried youth in China, to allay fears and misconceptions of parents, and to enhance family-based sex education in terms of increasing parents' SRH knowledge and their capacity and skills of providing such information to unmarried youth.

Keywords: parental attitudes, unmarried youth, sexual and reproductive health, China

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INTRODUCTION

Along with a gradual erosion of strict traditional cultural and social norms affecting young unmarried people's sexuality, the political and social environments have evolved to support research and the provision of information on adolescent

sexual and reproductive health (SRH) in China. A number of wide-ranging research studies and action programs have been successfully implemented to address the issues of unmarried adolescent and young people's sexual and reproductive health (China Family Planning Association, 2002; Gao *et al*, 2003; Lou *et al*, 2004, China Sexology Association, 2005). These projects and studies have improved the knowledge of service gaps and our understanding of the SRH needs of young unmarried people in China.

However, what is less well studied and understood are the underlying factors that may place young people at greater risk of unsafe sexual activity or the protective influences that encourage safe behaviors. Despite recent studies conducted in China that emphasize the important role and involvement of parents and family in adolescent SRH programs (Cui *et al*, 2001, 2002; Jiang, 2004; Gao *et al*, 2004; Tu *et al*, 2005; Zhang *et al*, 2007a,b), there is a notable lack of formative research conducted among parents, particularly on the perspectives and attitudes of parents towards the provision of contraceptives and other SRH information and services to unmarried adolescents and youth, and the factors that affect their perspectives and attitudes.

A previous study (Cui *et al*, 2001) based on qualitative research method highlighted the ambivalence of parents in the face of changing sexual norms and behaviors among their unmarried children. The study found that parental reticence remains a pervasive obstacle to the adoption of safe sex behaviors by unmarried youth, as well as to the provision of SRH information and services to unmarried adolescents and youth in China. As this was an entirely qualitative study using focus group discussions, it

was not possible to discern how parental socio-demographic factors and parent's knowledge of SRH, affect their attitudes and perspectives.

With support from the World Health Organization, this study was conducted during May 2008 to May 2010. The objectives of the study were to explore parental perspectives and attitudes towards the provision of sexual and reproductive health information and services for unmarried adolescents and youth in Chengdu, China, and how parental background factors affect their perspectives and attitudes.

The hypothesis of the study was that parents who have correct and sufficient knowledge of sexual development and reproductive health are more willing to communicate to their children on these matters and be supportive of programs that provide services and information to young people.

MATERIALS AND METHODS

Survey sites and subjects

The community-based study was conducted from May 2008 to May 2010 in Chengdu City, Sichuan Province, China. Sichuan Province is located in the southwest of China, and Chengdu is the capital city of the province and it is the center of politics, economy and culture of Sichuan Province. Chengdu has both urban and rural areas. It includes six urban districts, four rural districts, four county-level cities, and six counties. Each urban and rural district all consist of several street/township administrative agencies, and each agency has different numbers of so-called mini-communities (neighborhood community).

The eligible subjects of the study were parents (both fathers and mothers) who

had at least one unmarried adolescent and/or youth aged 15 to 24 years old (including both in-school and out-of-school children).

Sampling methods

The stratified, multistage cluster sampling methods were used in the study with urban and rural areas as two primary strata. In each urban and rural stratum, one district was selected, separately, and the selected district was relatively representative of the average level of urban and rural area in Chengdu in terms of economic and social development, population size, as well as other related factors. The selected rural district was distinctly different from the urban residential setting of Chengdu. From each selected urban and rural district, some street/township administrative agencies were chosen randomly, and then in each street/township administrative agency several mini-communities were selected, separately. Again, the mini-communities selected in urban and rural site were fairly representative of the typical urban and rural residential settings of Chengdu with regard to components of residents, such as the nature of the residence card, occupation and main source of income, and the geographic area of residence. From practical consideration, a cluster-sampling method was used at this stage to draw the work units, factories, and villages within the selected mini-communities as the basic sample units.

After selecting the basic sample units within the mini-communities from each stratum, the lists of employees/residents who had an unmarried child (or children) aged 15 to 24 years old in a household were obtained from the relevant departments.

Survey methods

Structured and self-administered

questionnaires were used to elicit information anonymously. The purpose of the study and risks/benefits of the study, as well as detailed instructions on how to complete the questionnaire were explained to the eligible parents in face-to-face meetings in advance. The participation in the study was voluntary, with the consent of the respondents. The questionnaire was pre-tested and revised before finalization. The study was reviewed and approved by the Specialist Panel on Social Science and Operations Research in Sexual and Reproductive Health (WHO Project No. A45115, Dec 19, 2007), WHO Research Ethics Review Committee and the Institutional Ethical Review Board of Population and Family Planning Research Institute of Sichuan.

Measures of parental SRH knowledge

Parents' knowledge of sexual and reproductive health issues was measured by a series of questions relating to physiological, psychological, and behavior changes during puberty (10 questions); awareness of SRH issues, including knowledge of contraceptives, STIs and AIDS (16 questions); as well as awareness of adolescent risk behaviors (10 questions). Indices were created that sum the various questions relating to each measure; to facilitate comparison, all indices were scored from 0 to 100.

Data management and statistical analyses

Data collected from the questionnaire survey were entered into computer with the software of EpiData[®] version 3.1 (The EpiData Association, Odense, Denmark, 2004) by the double-entry method. Before the statistical analysis, data processing including verification of data, consistency and logical checks on the data were done by using the software SPSS[®] version 13.0 (SPSS, Chicago, IL, 2004).

Differences of the mean scores of parental SRH knowledge and percentage distributions between categorical variables were examined with *t*-test and χ^2 test. In multiple logistic regression analysis, the outcome variable was perspectives and attitudes of parents, ranging from negative to supportive, toward the provision of contraceptive service for unmarried adolescents and youth [1 = not acceptable (reference group), 2 = understandable, and 3 = acceptable]. Parents' socio-demographic characteristics, such as age, sex, residential status, and education and occupation status; whether living with children, ever had communication with their child on sex-related topics, worry about their child's unsafe sexual behavior, whether SRH services should be provided the same or not for married and unmarried, sex of the respondents' child, and sexual experiences of the respondents' child were factors included in the model, and levels of parents' SRH knowledge, and age of parents were covariates in the model (as Test of Parallel Lines with $p < 0.05$, so multinomial logistic regression analysis was used instead of ordinal regression analysis). SPSS® version 13.0 was used for statistical analysis.

RESULTS

In total, 3,267 parents were eligible for the study and 2,877 of them completed the questionnaire; a response rate of 88.1%. The response rate in the rural area (83.5%) was lower than that in urban area (93.3%). The main reason for this was that some eligible respondents were away from home for work. Among the 2,877 questionnaires, 6 (0.2%) were discarded (5 because insufficient data, and one respondent's child was less than 15 years old). Thus, a total of 2,871 valid questionnaires

were analyzed for this study. As it was an anonymous self-completion questionnaire survey, respondents had the choice not to answer any question they did not wish to. Results shown below are based on the data for 2,871 respondents.

Profile of survey respondents

Among 2,871 subjects, 1,175 (41 %) were fathers and 1,691 (59%) were mothers. Age of subjects ranged from 35 to 63 years, with average age of 43.9±4.5 years (fathers 45.0±4.5, and mothers 43.2±4.3 years). There were 1,414 (49.3%) urban residents and 1,457 (50.7%) rural residents. Ninety four percent of subjects were currently married at the time of survey, 4.2% divorced and the rest were separated. Among the respondents, 2,538 (88.4%) had one child, 327 (11.4%) had two children, and 6 (0.2%) had three children. The educational attainment of the respondents was relatively high with 84% having studied beyond primary education and 32% had college education. Nearly half of the respondents were farmers.

SRH knowledge of respondents

Table 1 shows different score levels of parents SRH-related knowledge by their socio-demographic characteristics. While awareness of adolescent's risk behaviors was considerable, awareness of puberty development, and particularly awareness of SRH was quite limited. Findings also suggested that differences between fathers and mothers for all three types of knowledge were not significant, but the scores were all significantly lower for rural parents as compared to urban parents. In addition, older groups of parents tended to score higher than younger groups; and a positive association between education levels of parents and every indicator of awareness was observed. Similarly, score levels were higher among those parents

Table 1
Mean scores of sexual and reproductive health (SRH) related knowledge of parents,
by background characteristics, Chengdu, 2008.

| Variables | Number (%) | Type of knowledge | | |
|----------------------------|--------------|----------------------------------|-------------------|--|
| | | Awareness of puberty development | Awareness of SRH | Awareness of adolescent's risk behaviors |
| Total | 2,871 (100) | 62.4 | 55.7 | 75.9 |
| Gender | | | | |
| Father | 1,175 (41.0) | 63.6 ^a | 56.6 | 76.1 |
| Mother | 1,691 (59.0) | 61.6 | 55.0 | 75.7 |
| Residential status | | | | |
| Urban | 1,414 (49.3) | 73.6 ^b | 68.7 ^b | 81.4 ^b |
| Rural | 1,457 (50.7) | 51.6 | 43.1 | 70.6 |
| Age group (years) | | | | |
| 35 - 39 | 506 (17.6) | 61.3 ^a | 52.0 ^b | 75.4 ^b |
| 40 - 44 | 1,205 (42.0) | 59.7 | 53.1 | 74.8 |
| 45 - 49 | 787 (27.4) | 66.3 | 60.7 | 77.2 |
| ≥ 50 | 373 (13.0) | 64.7 | 58.8 | 77.3 |
| Education status | | | | |
| ≤ Primary | 460 (16.0) | 43.4 ^b | 34.5 ^b | 67.7 ^b |
| Junior middle school | 902 (31.4) | 54.8 | 46.6 | 72.0 |
| Senior middle school | 544 (19.0) | 70.3 | 64.3 | 79.3 |
| College | 920 (32.1) | 74.2 | 69.7 | 81.6 |
| ≥ Graduate | 43 (1.5) | 73.0 | 66.3 | 80.9 |
| Occupation status | | | | |
| Worker | 396 (13.8) | 71.8 ^b | 67.0 ^b | 81.7 ^b |
| Farmer | 1,411 (49.2) | 51.4 | 43.0 | 70.6 |
| Cadre | 610 (21.2) | 72.1 | 68.2 | 80.2 |
| Professionals ^c | 382 (13.3) | 77.1 | 70.4 | 83.0 |
| Service and others | 72 (2.5) | 67.9 | 59.0 | 73.2 |

^a $p < 0.05$, ^b $p < 0.001$

^cIncluding teacher, scientific and medical personnel.

who were engaged in non-agricultural occupations.

Parental perspectives and attitudes towards the provision of SRH information and services for unmarried adolescents and youth

Table 2 presents parental perspectives and attitudes towards sex-related behaviors of unmarried adolescents and youth, as well as their attitudes towards the provision of SRH information and ser-

vices for them. About two-thirds of parents surveyed did not accept pre-marital sexual activity, more than one-quarter indicated understanding. Approximately 80% of parents accepted and understood unmarried adolescents and youth seeking SRH counseling and services, but the percentages of such positive attitude were much lower for premarital contraceptive use. Over half of the parents were supportive of providing SRH education and

Table 2
Parental perspectives and attitudes towards the provision of SRH information and services for unmarried adolescents and youth (%), Chengdu, 2008.

| Questions | Attitudes | | | | | Total |
|---|----------------|----------------|------------|-------------|-------|-------|
| | Not acceptable | Understandable | Acceptable | Do not know | | |
| How to view premarital sexual activity. | 64.3 | 27.7 | 2.0 | 6.0 | 100.0 | |
| How to view SRH counseling and service seeking by unmarried adolescent and youth. | 12.4 | 48.9 | 30.6 | 8.1 | 100.0 | |
| How to view contraceptive use by unmarried adolescent and youth. | 25.7 | 39.1 | 24.1 | 11.1 | 100.0 | |
| How to view provision of SRH education and information to unmarried adolescent and youth. | 23.1 | 10.4 | 54.9 | 11.6 | 100.0 | |
| How to view provision of contraceptive service to sexually active unmarried adolescent and youth. | 26.7 | 36.0 | 25.1 | 12.2 | 100.0 | |

information to unmarried adolescents and youth; whereas, on the provision of contraceptive service to sexually active unmarried adolescents and youth, 27% were negative, 25% accepted, 36% indicated an understanding, and the remaining 12% had no opinion.

Parental perspectives and attitudes towards the provision of contraceptive service to sexually active unmarried youth

Table 3 shows parental perspectives and attitudes towards the provision of contraceptive service to sexually active unmarried youth, by their background characteristics and levels of SRH knowledge. Data showed that fathers, urban parents, older parents, and those parents who were engaged in cadres and professionals were more likely to hold acceptable and understandable attitudes for the provision of contraceptive service to sexually active unmarried youth than their counterparts. In addition, positive associations were noted for the provision of contraceptive service by the educational level of parents, as well as by the score levels of different type of SRH related knowledge.

Similarly, Table 4 shows parental perspectives and attitudes towards the provision of contraceptive service to sexually active unmarried youth, by characteristics of respondents' children and communication with their children. Parents who have boys, parents who knew their children were dating, ever had premarital sexual experience, ever had premarital pregnancy and ever had premarital induced abortion were more likely to hold positive attitudes. Because of the cross-sectional nature of the survey, it is difficult to suggest the direction of causation. No obvious trends of parents' attitudes were observed when comparing

Table 3
Parental attitudes towards the provision of contraceptive service to sexually active unmarried youth, by background characteristics and knowledge level (%), Chengdu, 2008.

| Variables | Number (%) | Attitudes | | | | p-value ^a |
|---|--------------|----------------|-----------------|------------|-------------|----------------------|
| | | Not acceptable | Under-standable | Acceptable | Do not know | |
| Gender | | | | | | |
| Father | 1,175 (41.0) | 25.3 | 37.6 | 27.1 | 10.0 | <0.01 |
| Mother | 1,691 (59.0) | 27.7 | 34.8 | 23.8 | 13.7 | |
| Residential status | | | | | | |
| Urban | 1,414 (49.3) | 23.6 | 41.0 | 28.1 | 7.2 | <0.001 |
| Rural | 1,457 (50.7) | 29.6 | 31.2 | 22.2 | 17.0 | |
| Age group (years) | | | | | | |
| 35 - 39 | 506 (17.6) | 31.4 | 32.6 | 20.8 | 15.2 | <0.001 |
| 40 - 44 | 1,205 (42.0) | 26.3 | 34.9 | 25.3 | 13.4 | |
| 45 - 49 | 787 (27.4) | 24.5 | 41.0 | 25.9 | 8.5 | |
| ≥ 50 | 373 (13.0) | 26.0 | 33.5 | 28.7 | 11.8 | |
| Education status | | | | | | |
| ≤ Primary | 460 (16.0) | 29.6 | 28.9 | 18.5 | 23.0 | <0.001 |
| Junior middle school | 902 (31.4) | 30.9 | 31.6 | 21.8 | 15.6 | |
| Senior middle school | 544 (19.0) | 28.3 | 36.6 | 25.7 | 9.4 | |
| College | 920 (32.1) | 20.4 | 43.3 | 31.1 | 5.2 | |
| ≥ Graduate | 43 (1.5) | 18.6 | 41.9 | 30.2 | 9.3 | |
| Occupation status | | | | | | |
| Worker | 396 (13.8) | 28.0 | 37.9 | 24.5 | 9.6 | <0.001 |
| Farmer | 1,411 (49.2) | 29.3 | 31.5 | 21.8 | 17.4 | |
| Cadre | 610 (21.2) | 22.6 | 40.3 | 30.5 | 6.6 | |
| Professionals ^b | 382 (13.3) | 20.7 | 43.7 | 30.1 | 5.5 | |
| Service and others | 72 (2.5) | 33.3 | 36.1 | 22.2 | 8.3 | |
| Knowledge level of puberty development | | | | | | |
| Low (score < 50) | 696 (24.2) | 27.0 | 34.2 | 18.1 | 20.7 | <0.001 |
| Middle (score 50-79) | 1,076 (37.5) | 31.4 | 32.8 | 21.9 | 13.8 | |
| High (score ≥ 80) | 1,099 (38.3) | 21.8 | 40.3 | 32.7 | 5.2 | |
| Knowledge level of SRH | | | | | | |
| Low (score < 50) | 905 (31.5) | 27.5 | 34.8 | 18.2 | 19.4 | <0.001 |
| Middle (score 50-79) | 1,382 (48.2) | 29.3 | 35.7 | 24.2 | 10.7 | |
| High (score ≥ 80) | 584 (20.3) | 19.2 | 38.5 | 37.8 | 4.5 | |
| Knowledge level of adolescent's risk behaviors | | | | | | |
| Low (score < 50) | 259 (9.0) | 32.4 | 33.6 | 12.0 | 22.0 | <0.001 |
| Middle (score 50-79) | 846 (29.5) | 28.0 | 36.1 | 20.3 | 15.6 | |
| High (score ≥ 80) | 1,766 (61.5) | 25.2 | 36.4 | 29.3 | 9.1 | |

^a p-value of Pearson chi-square test

^b Including teacher, scientific and medical personnel

Table 4
Parental attitudes towards the provision of contraceptive service to sexually active unmarried youth, by characteristics of child and communication with child (%), Chengdu, 2008.

| Variables | Number (%) | Attitudes | | | Do not know | p-value |
|---|--------------|----------------|-----------------|------------|-------------|---------|
| | | Not acceptable | Under-standable | Acceptable | | |
| Sex of child | | | | | | |
| Boy | 1,487 (51.8) | 24.0 | 37.9 | 26.5 | 11.6 | <0.01 |
| Girl | 1,224 (42.6) | 30.1 | 34.3 | 23.4 | 12.2 | |
| Both boy and girl | 160 (5.6) | 25.6 | 31.9 | 25.0 | 17.5 | |
| Sex-related behaviors of child ^a | | | | | | |
| Dating | 605 (21.1) | 20.5 | 37.4 | 30.7 | 11.4 | - |
| Ever had premarital sex | 89 (3.1) | 9.0 | 41.6 | 33.7 | 15.7 | |
| Ever had premarital pregnancy | 38 (1.3) | 13.2 | 34.2 | 36.8 | 15.8 | |
| Ever had premarital induced abortion | 34 (1.2) | 14.7 | 35.3 | 38.2 | 11.8 | |
| Communication with child on sex-related topics | | | | | | |
| Often talk | 238 (8.6) | 28.6 | 35.3 | 29.0 | 7.1 | >0.05 |
| Generally talk | 353 (12.8) | 23.5 | 41.1 | 24.6 | 10.8 | |
| Seldom talk | 2,176 (78.6) | 26.8 | 35.6 | 24.9 | 12.7 | |
| Communication with child on safe sex and contraceptives | | | | | | |
| Often talk | 181 (6.6) | 27.6 | 31.5 | 31.5 | 9.4 | <0.05 |
| Generally talk | 217 (7.9) | 20.7 | 44.2 | 25.3 | 9.7 | |
| Seldom talk | 2,359 (85.6) | 26.8 | 36.0 | 24.9 | 12.3 | |

^a Four questions asked separately and here only list answer with "yes".

whether or not their children were in school or out-of-school (data not shown).

Findings of the study also showed that the topics of communication between parents and their children and frequency of communication vary very much. For example, the topics most discussed were clearly focused on children's study (66.4% often talk, 23.1% generally talk, and 10.5% seldom talk), and much less on sex-related topics (8.6% often talk, 12.8% generally talk, and 78.6% seldom talk), and far less on safe sex and contraceptives (6.6% often talk, 7.9% generally talk, and 85.6% seldom talk) (Table 4). However, findings still showed that those parents who had more communication with their children

on personal and sex-related topics were more willing to support the provision of contraceptives to sexually active unmarried youth.

Results discussed thus far have been based on simple bivariate analysis. Many variables are often interrelated and, therefore, a multivariate analysis that controls for the confounding effects while examining the relation between a particular independent (predictor) variable and the dependent variable is much more meaningful. We applied multinomial logistic regression on parental attitudes by their background characteristics and other variables as predictors. Results from this analysis showed that parents with higher

score of SRH knowledge (OR 1.14; 95% CI 1.05- 1.23, $p = 0.002$), and with higher score of adolescent risk behaviors (OR 1.15; 95% CI 1.05- 1.26, $p = 0.002$), fathers (OR 1.42; 95% CI 1.04- 1.94, $p = 0.026$), and often communicated with children on sex-related topics (OR 1.86; 95% CI 1.28- 2.70, $p = 0.001$), were more willing to support the provision of contraceptive service to sexually active unmarried youth. Parents who thought SRH services should be differently provided for unmarried and married (OR 0.33; 95% CI 0.24- 0.45, $p = 0.000$), and respondents' children had no premarital sexual activity (OR 0.25; 95% CI 0.08- 0.81, $p = 0.02$) were more likely to disapprove of such service provision.

DISCUSSION

Researchers elsewhere have noted three basic sets of protective factors that encourage safe behaviors of young people: individual self-efficacy, including awareness and negotiation skills; a responsive and friendly health service setting; and, finally, a supportive family and community environment, notably the influence of parents (Senderowitz, 2000). Researchers also have found that family status and involvement are strongly associated with health and risk behaviors in adolescents. Parental monitoring and supervision are reported to have inverse relationship with teen pregnancy risk (including not having sex, delaying sexual debut, having fewer partners, and using contraception) (Hawkins *et al*, 1999; Romer *et al*, 1999; DiClemente *et al*, 2001, Podhisita *et al*, 2001, Cui *et al*, 2004; Wight *et al*, 2006). In addition, in assessing protective factors, studies suggest that parental characteristics, *ie*, education, occupation, social economic status (SES), and communication between parents and adolescent children,

influence sexual perceptions and behaviors of adolescents (Wang *et al*, 1997; Gao *et al*, 1999; Miller, 2002, Ito *et al*, 2006, Wang *et al*, 2008). Parents have the potential to play an important role in shaping the attitudes and behaviors of adolescent sexual and reproductive health. Parents can facilitate or act as barriers to information and services for young people. Parents can also provide a supportive environment to adolescents, communicate with them on sensitive matters, and provide them non-judgmental counseling; all of these are recognized as important factors underlying good SRH of youth.

This paper documents parental perspectives and attitudes towards the provision of SRH information and services for unmarried adolescents and youth, and shows how parental background characteristics affect their perspectives and attitudes. The study revealed several important findings. First, parents' SRH-related knowledge was dismally poor. While awareness of adolescent's risk behaviors is considerable, awareness of puberty development, and particularly awareness of SRH remains quite limited. This might be due to the lack of information and sex education for the generation of parents studied. Parental knowledge level was associated with their socio-demographic characteristics, such as residential area, education level and occupational status.

Second, parents' attitudes of ambivalence with regard to the provision of SRH information and services, particularly for the contraceptive service to unmarried youth, were rather similar compared to those noted in a previous qualitative study (Cui *et al*, 2001), *ie*, pulled on the one hand by Chinese parents' adherence to traditional norms which consider premarital sex and provision of contraceptives to the unmarried youth as against

the Chinese traditional norms; and on the other hand, sexual norms and behaviors are rapidly changing, particularly for young unmarried people. Considering protection of the health and well being of their unmarried children, there is a need to provide contraceptives for those who are sexually active. Many parents expressed a deeply felt ambivalence about the best way forward.

Third, results from bivariate analysis and multinomial logistic regression analysis uphold the hypothesis of the study. Parents who have higher scores of sexual and reproductive health related knowledge and higher educational level, parents who were engaged in non-agricultural occupations, and parents who ever had communication with their unmarried children on sex-related topics were more willing to support programs that provide SRH education and information to unmarried adolescents and youth, and more likely to support the provision of contraceptives to sexual active young unmarried people.

Findings from this study suggest that parents-oriented sex education programs are needed. The current situation in China shows that parents/family involvement in puberty education and adolescent sexual and reproductive health program has progressed rather slowly, and parents' role in influencing the attitudes and behaviors of adolescent sexual and reproductive health has not been given enough attention in Chinese society. For example, many studies report that main channels through which adolescents obtained the knowledge and information about sex, contraception and STDs were books, magazines, TV/radio programs, AV tapes, and chats with same-aged friends, but not from school teachers and far less from their parents (Cui *et al*, 2000; Gao *et al*, 2004). Research results have also shown

that 30-40% of Chinese parents seldom communicate with their children on any topic and most parents lack skills and means of communication with their children on sexual matters. The topics most likely to be discussed are clearly focused on schooling or career of the children, and far less personal and sexual matters (Cui *et al*, 2001; Jiang, 2004; Gao *et al*, 2004; Cui *et al*, 2004; Zhang, 2004; Zhang *et al*, 2007a,b).

The parent-oriented programs should be aimed at resolving: first, the dilemmas faced by parents that need to be recognised and addressed. Parents should be apprised of current existing SRH conditions of unmarried adolescents and young people, the importance of the well-being of their unmarried children, and of appropriate contraceptives and facilities available. Education for parents could allay fears and misconceptions about the connection between the provision of information and services and increased premarital sexual activity, as well as emphasize parental role and participation in protecting their unmarried children's reproductive health and well-being.

Second, in order to improve parental ability of giving their children more practical counselling and guidance, a series of training activities need to be provided for them to improve their SRH knowledge, and the techniques and skills of communication with young unmarried people on sensitive matters. Parents should be informed that communicating with their adolescent children about SRH issues could be helpful in protecting them from unsafe and unwanted sex. And, the training programs could assist them in overcoming inhibitions about communicating with their adolescent children on sensitive matters. Few such programs currently exist in China. Parents need to be educated

in recognizing and understanding of the sexual and reproductive health needs of their unmarried adolescents and youth.

Finally, providing better and broader sexual and reproductive health education and services for unmarried adolescents and young people is not only a matter for few departments, but requires involving other sectors, including Youth and Women's Associations, Labor Union, the media and non-governmental organizations, etc. Ultimately, of course, it is the family-school-society nexus that is central in addressing the sexual and reproductive health concerns and needs of young unmarried people.

By documenting parental perspectives and attitudes towards the provision of SRH information and services for unmarried adolescents and youth, this study fills an important knowledge gap and provides directions for policies and programs in China. Most parents are supportive of providing SRH information, but remain ambivalent towards providing contraceptive services to unmarried youth. Parent-oriented sex education and skill development programs are urgently needed to better address the SRH needs of young people in China.

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