Adolescent reproductive health and gender role attitudes in Oman

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ABSTRACT

Objectives: The aim of the study was to investigate the attitudes of Omani adolescents towards the different gender roles and women empowerment with regard to taking household decisions, and to study how they influenced the adolescents' knowledge and attitudes towards some reproductive health issues in a national representative secondary schools-based sample of 1670 boys and 1675 girls.

Methods: In 2001, through a self administrated questionnaire the adolescents answered 2 indices; adolescents Attitudes Toward Gender Roles (ATGR) and adolescents Attitudes Toward Women Empowerment (ATWE) in addition to answering questions on demographic data, environmental factors, and questions assessing their knowledge and attitudes towards reproductive health issues.

Results: High scores of ATGR or ATWE were found to significantly predict sound adolescents' reproductive health knowledge or positive attitudes in almost all the logistic regression models.

Conclusion: The study highlighted the scope of interventions to be initiated for adolescents reproductive health. Changes in attitudes towards gender role have to accompany our endeavors to set up the stage for our future generation's reproductive health.

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Adolescence (10 - 19 years of age) is both a transient stage, between childhood and adulthood, and a formative period during which many life patterns are learned and established. The International Conference on Population and Development, Cairo in 1994, and the Fourth International Conference on Women, in Beijing in 1995, both endorsed the rights of young people to reproductive health information and services.[1] The International Conference on Population and Development has envisioned a world where all individuals have access to comprehensive reproductive health information and services through out their life cycle by 2015.[2]

Meeting the reproductive health needs of youth requires, providing services, as well as changing attitudes, overcoming community opposition, building an understanding and educating adults regarding young people's reproductive health needs. Given the high level of demand, a lot of efforts are put towards finding acceptable and effective ways to help young people protect and maintain their reproductive health.[3,4] Oman continues to have a high rate of adolescent marriage and a high total fertility rate (TFR), 4.8 in 2000, albeit its drop from 7.05 in 1995.[5] In view of the shrinking global economy, Oman should be prepared to deal with the fertility problem and to address the issue of women empowerment and its proxies, which definitely affect high fertility rate. Al Riyami and Afifi[6] concluded that the degree of women empowerment in household decision making was significantly associated with less number of children ever born and longer birth interval after adjusting for other

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fertility determinants such as women age, level of education and residence.[6] Examining adolescents attitudes toward gender issues would shed the light on future status of women empowerment in Oman and adolescents reproductive health (ARH), leading to strategies and interventions for the future.

This study is a part of a national representative school-based knowledge, attitude and practice survey aiming at better understanding of Omani Youth and adolescents.[7] The study was conducted in the year 2001 by the Department of Family and Community Health, Ministry of Health (MOH), Sultanate of Oman in collaboration with the World Health Organization and the United Nation Childrens Fund offices in Oman and other Omani Ministries. The overall goal of the survey was to establish a database on secondary school adolescents' knowledge, attitude and practices in the fields of reproductive health and healthy lifestyle to enhance polices and programs directed to this age group in Oman. The aim of the study was to investigate the attitudes of Omani adolescents towards the different gender roles and women empowerment in taking household decisions, and to study its influence on adolescents' knowledge and attitudes towards some reproductive health issues in a national representative secondary school-based samples of both sexes.

Methods.

Sampling technique. A multi-stage stratified random sampling technique was adopted and a sample size was calculated assuming that the least prevalent variable to be studied was 5% at 90% confidence interval. The sample size was distributed in proper allocation of the number of students in each governorate and grade in different strata and the primary sampling unit was the school grade, where 11 students from each grade were selected randomly. Accordingly, 1670 adolescent boys (3.3% out of total 50716) and 1675 adolescent girls (3.1% out of total 54192) were selected representing secondary school adolescents in the Sultanate of Oman. The response rate was 89% among boys and 97% among girls with a total of 1485 boys and 1629 girls (total 3114) subjected for statistical analysis. To avoid the non-response bias from students being absent on the day of the survey sample, weights were used in analysis of the data.

Survey tools. The survey, through a self administrated questionnaire, which was answered by all boys and girls selected, covered the following topics such as puberty, marriage issues, birth spacing, sexually transmitted diseases and HIV/AIDS, female circumcision, risk behavior lifestyle, social upbringing and relations, and the role of schools and school health services. The questionnaire was piloted before it was finalized in 2 of the Sultanate regions, namely, Muscat and South Batinah. The data collection phase commenced in April 2001 and continued for one month. Students were informed of the purposes of the study and reasons of obtaining the information. The questionnaire was completed under conditions of strict anonymity within a single school period of approximately 90 minutes. In the current paper, we will focus on special parts of the study tool comprising an array of questions examining adolescents' knowledge and attitudes in reproductive health issues, which constituted the output or dependent variables, in addition to some demographic variables and 2 indices on attitudes towards gender roles and women empowerment as the predicting variables.

1) Reproductive health knowledge and attitudes. The knowledge of boys' and girls' adolescents on puberty was examined by asking them whether they received the information on the changes of puberty before reaching puberty age. Adolescents were also asked whether they know the consequences of teenage marriage as well as the consanguineous marriage and its drawbacks in addition to their attitude towards polygamy. In addition, the attitude of the study group towards the ideal number of children desired in the future was examined besides the level of knowledge on the ideal (healthy) period for birth spacing. The respondents were also asked whether families with high income should use birth spacing or not. Moreover, the attitude of adolescents towards female circumcision was examined.

2) The adolescents Attitude Towards Gender Roles (ATGR) scale. To examine the adolescents' attitudes toward gender roles; adolescents of both sexes answered 11 statement Likert scale on the different roles played by or expected from women or men in the community (**Table 2**). Each statement was to be answered by selecting one of the responses, such as highly agrees, agrees, disagrees, and highly disagrees (a score ranging from 1 - 4 was used). To understand the adolescent attitude better and to correlate it with other variables, an index was created by computing the scores of the items together and accordingly, the adolescents ATGR index should range from 11 or below (in case of missing answers) to a maximum of 44, where 11 or below were given to the subject with negative, traditional or non-egalitarian attitude towards female gender roles in the community. The score actually ranged between 4 - 42 with a mean of 29.5 and 4.4 standard deviation. Its Alfa Cronbach reliability was satisfactory (0.56).

3) The adolescents Attitude Towards Women Empowerment (ATWE) in household decisions scale. Similarly, to understand the ATWE in household decisions in relation to adolescents, both sexes were asked "Who has the final say on…" 7 items related to household decision-making:

Table 1 - Adolescents' demographic variables and characteristics, n=3114.

Variables	(%)
Sex	
Male	(47.7)
Female	(52.3)
Age	
Below 16	(9)
16 years	(26.1)
17 years	(27.8)
18 years	(23)
19 years and above	(14.1)
Grade	
First secondary	(37)
Second	(34)
Third	(29)
Father's education	
Illiterate	(24.3)
Read and write	(35.5)
Primary preparatory	(23.7)
Secondary and above	(16.5)
Mother's education	
Illiterate	(55.1)
Read and write	(17.2)
Primary preparatory	(21)
Secondary and above	(6.6)
Parental relations	
Always agree	(29.9)
Agree usually	(31.1)
One deceased	(9.7)
Fight sometimes	(19.2)
Fight always	(6)
Separated/ divorced	(4.1)
Adolescents attitude towards gender roles score	
Mean ± SD	29.51 ± 4.44
Adolescents attitude towards women empowerment in household decisions score	
Mean ± SD	11.56 ± 1.74
Puberty changes before reaching it	
Yes, have information	(76.8)
No	(23.2)
Teenage marriage has bad consequences	
Yes, have information	(77.7)
No	(22.3)
Marriage to relatives can cause problems	
Highly agree	(35)
Agree	(47.6)
Disagree	(11.5)
Highly disagree	(5.9)
Birth spacing should be at least	
<2 years	(10.5)
≥2 years	(76.2)
Don't know	(13.3)
Couples use birth spacing if needed	
Highly agree	(17.8)
Agree	(50)
Conditionally agree	(2.2)
Disagree	(15.8)
Highly disagree	(14.2)
It is preferred to have one wife	
Highly agree	(40.5)
Agree	(48.7)
Disagree	(7.4)
Highly disagree	(3.4)
Ideal number of children	
≤5 children	(72.6)
6 and above	(27.4)
The need of birth spacing even for rich families	
Highly agree	(5.1)
Agree	(12)
Disagree	(41.9)
Highly disagree	(41)
Female circumcision is neither important nor essential	
Highly agree	(34.5)
Agree	(45.9)
Disagree	(10.4)
Highly disagree	(9.3)

Table 2 - Adolescents' attitude towards gender roles.

Items	Gender	
	Male	Females
Wife must get husband approval in everything		
Highly agrees	49.4	36.6
Agrees	37.7	46.7
Disagrees	9.5	13.1
Highly disagrees	3.4	3.6
Husband must take all important decisions alone		
Highly agrees	13.7	3.9
Agrees	25.5	14.2
Disagrees	44.6	48.2
Highly disagrees	16.2	33.7
Husband must help his wife on household chores especially if she is working		
Highly agrees activities	25.2	29.3
Agrees	62	62.9
Disagrees	9.5	5.8
Highly disagrees	3.3	2
Wife must be allowed to work if she wants that		
Highly agrees	8.3	21.2
Agrees	38.6	58.2
Disagrees	33.8	16.2
Highly disagrees	19.3	4.5
Wife must accept husband views even if she does not approve		
Highly agrees	25.7	15.8
Agrees	35.9	34.1
Disagrees	28.2	37.8
Highly disagrees	10.2	12.2
Wife must accept having another child according to husband's wish		
Highly agrees	12.8	6.9
Agrees	31.8	31.9
Disagrees	41.8	44
Highly disagrees	13.7	17.2
Wife with no male child must continue trying to conceive until she have one		
Highly agrees	10.8	6.3
Agrees	27.2	23.4
Disagrees	36.5	41.2
Highly disagrees	25.5	29.1
Boys education is more important than girl education		
Highly agrees	12.9	4.4
Agrees	15.6	5.6
Disagrees	34.2	20.6
Highly disagrees	37.3	69.4
Opportunities must be given to women to take top positions		
Agrees	30.7	42.4
Highly agrees	9.2	24.6
Disagrees	33.6	21.3
Highly disagrees	26.5	11.6
Don't know		0.1
Household decisions are taken by both partners		
Agrees	45.8	35.5
Highly agrees	49.2	61.3
Disagrees	3	1.8
Highly disagrees	1.9	1.4
Don't know	0.1	
Husband opinion is more important in taking important decisions		
Agrees	48.1	33.3
Highly agrees	22.1	9.6
Disagrees	20.9	35.1
Highly disagrees	8.9	21.9
Don't know		0.1

Table 3 - Adolescents attitude towards women empowerment in household decisions making.

Items	Gender	
	Male	Female
Managing family income		
Husband	42.1	24.8
Wife	7.4	4.5
Both together	50.5	70.4
Others	0.1	0.2
Wife wants to work		
Husband	73.7	57.7
Wife	4.4	3.4
Both together	21.0	37.8
Others	0.8	1
The number of children		
Husband	13.1	3.3
Wife	11.5	6.3
Both together	75.0	90
Others	0.4	0.4
The highest educational level for girls		
Husband	15.6	7.6
Wife	18.2	16.5
Both together	63.4	71.3
Others	2.9	4.6
The highest educational level for boys		
Husband	28.3	18
Wife	7.9	2.9
Both together	60.9	75
Others	2.9	4.1
Using family planning methods		
Husband	14.4	6.6
Wife	17.1	16.5
Both together	66.4	76.1
Others	2.1	0.8
Health care for children		
Husband	4.2	1.1
Wife	24.2	19.7
Both together	69.5	78.1
Others	2.1	1.2

household expenditures, wife wants to work, number of children the family wants to have, level of education of the girl, level of education of the boy, children's health care and family planning (**Table 3**). Each item was to be answered by selecting one of the following: the husband only has the final say; the wife has it, both partners together, or other people in the family. To better understand the adolescent attitude and to correlate it with other variables, an index was created starting by recoding the answers on each item to 1 or 2, where 2 was assigned if the respondent said that both partners are responsible for the household decision and 1 if he or she select any of the other 3 options mentioned above. Computing the scores of the items together, the adolescents ATWE index in household decisions ranged from 7 - 14, where a score of 7 denoted subjects with negative attitude towards women empowerment. The index actually ranged between 7-14 with a mean of 11.56, and 1.74 SD. Its Alfa Cronbach reliability was also satisfactory (0.62).

Both indices were used in our statistical models as independent or predictor variables to the sound knowledge or positive (healthy) attitudes towards the reproductive health issues mentioned above (the output variable). In the different logistic regression models, ATGR and ATWE were adjusted for other independent as demographic and social variables (age, sex, grade, father's education, mother's education, and the quality of parental relationship).

Data processing and analysis. Data entry was carried out using Integrated System for Survey Analysis, whereas, data analysis was carried out using the Statistical Package for Social Sciences version 6. In bi-variant analysis, data was presented in percentages and means. Multiple logistic regression models were conducted to test the most important associated factors with the 9 output variables concerning sound knowledge and attitude in reproductive health. The output variables used in the logistic regression models were either originally dichotomous or recorded to be so. The adjusted odds ratio shows the change in the odds of the studied dependent variable when the independent changed from 0 to 1. A p value of ≤ 0.05 was considered statistically significant.

Results. Approximately 48% of the respondents were boys and the mean age of the sample was 17.13 ± 1.35. Only 17% of adolescents' fathers had secondary education or above, which was significantly higher than mothers' education. The majority of parents in the study population had good relationship (61%), where as 4% were separated or divorced. The majority of the sample had satisfactory knowledge on puberty changes before reaching the age of puberty, the teenage marriage drawbacks, the risk of marriage to relatives, and the appropriate birth spacing interval. Likewise, their attitudes towards using birth spacing methods by either of the partners, their attitude against polygamy was also satisfactory. However, their attitude towards female circumcision and towards having an average of 4.8 children in the future was alarming. Although the majority said that even rich families need to use birth spacing methods, nearly one fifth of them had their negative attitudes towards this matter (**Table 1**). **Table 2 & 3** shows the distribution of ATGR and ATWE items in percentage, among boys and girls. Almost half of adolescent's boys highly agreed that "wife must get husband approval in everything", while only almost one third of girls did. On the other hand only 8% of boys highly agreed that "wife must be allowed to work if she wants that", whereas one fifth of girls highly agreed on that (**Table 2**). The majority of girls (70%) reported that "managing family income" should be a joint decision between both partners, while only half of boys reported that. Almost three fourths of the boys viewed that the decision for "wife wants to work" should be to the husband only (**Table 3**). It is clear from both tables that girls showed more egalitarian attitude than boys towards women empowerment. The difference was

Table 4 - Odds Ratio of significant predictors (variables adjusted to each others) for adolescents' knowledge about some reproductive health issues.

Variable	Puberty changes before reaching it	Teenage marriage has bad consequences	Marriage to relatives can cause problems	Birth spacing should be at least 2 years
Sex				
Male	1	1		
Female	1.21*	1.46*		
Grade				
First secondary				1
Second				1.54*
Third				2.3*
Father's education				
Illiterate	1			
Read and write	1.29*			
Primary-prep.	1.15			
Secondary and above	1.59*			
Mother's education				
Illiterate			1	
Read and write			0.89	
Primary-prep.			1.45*	
Secondary and above			1.19	
Parental relations				
Always agree			1	
Agree usually			1.35*	
One deceased			1.66*	
Fight sometimes			1.62*	
Fight always			1.01	
Separated/ divorced			1.22	
Adolescents attitude towards gender roles score		1.04*	1.06*	1.04*
Adolescents attitude towards women empowerment in household decisions score			1.08*	1.08*

* - significant at below 0.05

significantly proved by likelihood Chi-squared test, which showed significant differences in distribution between boys and girls even in case of aggregating the choices of "highly agree" and "agree" together versus "disagree" and "highly disagree" in case of ATGR, or aggregating the choices of "wife" and "both partners" versus "husband" and "others" for ATWE index. Girls were (**Tables 2 & 3**) more likely to have a positive attitudes toward gender roles or women empowerment in household decision than boys.

The 9 independent variables tested for association with the 4 knowledge variables (namely, know puberty changes before reaching it; teenage marriage has bad consequences; marriage to relatives causes problems; birth spacing should be at least 2 years), and the 5 attitude variables (namely, both couple should use birth spacing methods on need; it is preferred to have a single wife; the ideal number of child is <5; the need of birth spacing even for rich families; female circumcision is neither important nor essential) were adolescent's age, sex, grade, father's education. Mother's education, parental relationship, ATGR score and ATWE score. Data shows that one or more of these predictors were associated with one or more of the output variables except for age in **Table 4 & 5** and father's education in **Table 5**, which showed no significant association.

Adolescents ATGR or ATWE, as adjusted for the rest of independents, were significantly associated with all variables studies except for knowledge on puberty changes. Female sex was another significant predictor to know puberty changes before reaching it and that teenage marriage have its bad consequences. Girls were 1.21 and 1.46 times more likely to know than boys on these issues. Likewise, girls were 2 times more likely to have a negative attitude towards polygamy and having more than 5 children. Oddly, boys were 2/3 times less likely to

Table 5 - Odds ratio of significant predictors (variables adjusted to each other) for adolescents' attitudes towards some reproductive health issues.

Variable	Couples use BS on need	It is preferred to have one wife	Ideal number of children ≤5	The need of BS even for rich families	Female circumcision is neither important nor essential
Sex					
Male		1	1	1	
Female		2.31*	2.51*	0.69*	
Grade					
First secondary	1	1		1	
Second	1.05	1.02		1.61*	
Third	1.71*	0.68*		1.88*	
Mother's education					
Illiterate	1		1		
Read and write	1.22		1.09		1
Primary-preparatory	1.19		1.14		1.04
Second and above	1.82*		2.06*		0.96
					2.56*
Parental relations					
Always agree				1	
Agree usually				1.43*	
One deceased				1.5	
Fight sometimes				1.96*	
Fight always				0.96	
Separated/ divorced				1.29	
Adolescents attitude towards gender roles score		1.04*	1.05*	1.12*	1.03*
Adolescents attitude towards women empowerment in household decisions score	1.09*		1.06*	1.1*	

* - significant at below 0.05 , BS - birth spacing

point that rich families were not in need of birth spacing than girls. Mother's education was evidently more important than father's education for adolescents to acquire sound knowledge or positive attitudes towards some issues in reproductive health. As it is quite not unlikely to find an older student in a junior grade in Oman, grade played a significant role than the actual age.

Discussion. The study has shown positive as well as negative aspects of the knowledge and attitude of adolescents on variety of subjects. It also provided insight on what problems this age group faces and gave a clue for intervention. Moreover, it proved the association between positive attitude towards gender or the positive attitude towards women empowerment and having crucial pieces of knowledge on reproductive health.

Unfortunately, "gender" is increasingly used inappropriately as a substitute for "sex", particularly in medical literature, a tendency that has created confusion. Sex denotes biologically determined characteristics, while gender indicates culturally and socially shaped variations between men and women.[8] Gender is related to how we are perceived and expected to think and act as women and men due to the way society is organized, and not due to our biological differences.[9] Little attention has been given to either adolescents' gender role attitudes in Gulf countries or its link to their knowledge and attitudes in reproductive health. Therefore, the current study, as far as we know, is the first of this kind. Actually, this study came as a continuation of our growing concern on women empowerment and its impact on demographic transition in Oman. The previous studies[6,10,11] proved that only a minority of women were empowered to take a decision of family planning alone or with their husband. Still, men have the final say on the use of family planning methods or in having another child. Whether Omani adolescents accept the male domination is one of the questions considered in this study. The study suggests that the Omani boys, to some extent, conform to the traditional notions of what is expected from a male and a female in the Arab society. Girls were significantly more likely to express equal role attitude, similar to what was found in Egypt.[12] Girls also showed better knowledge and attitude towards some reproductive health issues as proved in the logistic regression models. This calls for the importance of finding

effective ways to educate men, young and adults, regarding the reproductive health processes.[13]

Oman's rapid development and modernization has allowed for a vast exposure to mass media that has made the adolescent population of Oman more vulnerable to the external influences than would be expected in a gradual transitional change. Accordingly, Oman, like many developing countries, has recognized adolescence as being a critical stage of human life and has understood the need to empower this group with the right knowledge and information and to create a supportive environment conducive to appropriate attitude and behavior. Young people face a variety of reproductive health risks; such as sexually transmitted infections including AIDS; too early pregnancy and childbearing with an increased risk of injury, illness and death for mother and infant; and unintended pregnancy, often leading to unsafe abortion and its complications. Young people may know little regarding reproductive health, may have incorrect information on fertility and contraception, may have received misleading information regarding contraception, or may have negative attitudes on contraceptives.[3,4] This requires finding effective ways to build sound knowledge and healthy attitudes among adolescents on reproductive health, which concern of public health officials in Oman. Although disentangling causal factors that link changing attitudes and changing societies is difficult, attitudes provide useful insight into public perceptions at particular periods. Just as structural changes in the family and the status of women have not occurred uniformly across cultures, recent attitude change has varied cross-culturally as well.[14]

A limitation of this study is that its findings could not be generalized to the entire youth and adolescents population in Oman as it was a school based survey. Despite the fact that education is universal in Oman, some adolescents could leave secondary schools. Another limitation is that comparison between these findings with previous Omani studies or Gulf studies is limited due to the absence of previous studies.

References

1. Senderowitz J. A review of program approaches to adolescent reproductive health. Poptech Assignment Number 2000.176 June 2000. URL: http://www.poptechproject.com/pdf/review06_00.pdf
2. Situation analysis of Adolescent Reproductive Health (ARH) In Selected Pacific Island Countries. URL: http://www.unescobkk.org/ips/arh-web/news/word/situation.doc
3. Qayed MH. KAP Study on Reproductive Health Among Adolescents and Youth in Assiut Governorate, Egypt. Summary of Final Report Prepared for The Women's Studies Project Family Health International. The Research Management Unit of The National Population Council, Cairo, Egypt, June 1998. URL: http://www.fhi.org/NR/rdonlyres/ehfv33os6s55nhiepl7ghmzplgpjdbhsuppnthjdibffticpmqps3tmrhdp5qstmbizapc255dil2k/egypt2s.pdf
4. UNFPA. Annual Report 1999. URL: http://www.unfpa.org/about/report/report99/unfpain99.htm
5. Al Riyami A, Afifi M, Al Kharusi H, Morsi M. National Health Survey 2000. Principal report. Ministry of Health, Muscat (Oman): 2000.
6. Al RiyamiAA, Afifi M. Determinants of Women Fertility in Oman. ***Saudi Med J*** 2003; 24: 748-753.
7. Jaafer Y, Al Agami F, Al Weheshi K. Towards better understanding of youth. Ministry of Health, Muscat (Oman): 2003.
8. Vlassof C, Moreno CG. Placing gender at the center of health programming: challenges and limitations. ***Soc Sci Med*** 2002; 54: 1713-1723
9. World Health Organization. Gender and health: technical paper. WHO/FRH/WHD/98.16. 1998. p 10.
10. Al Riyami AA, Afifi M. Women Empowerment and Marital Fertility in Oman. ***J Egypt Public Health Assoc*** 2003; 68: 25-30.
11. Al Riyami AA, Afifi M, Mabry R. Women's autonomy, education and employment in Oman and their influence on contraceptive use. ***Reprod Health Matters*** 2004; 12: 144-154.
12. Mensch BS, Ibrahim, BL, Lee SM, El-Gibaly O. Gender-role attitudes among Egyptian adolescents. ***Stud Fam Plann*** 2003; 34: 8-18.
13. Figueroa-Perea JG. A gendered perspective on men's reproductive health. International Journal of Men's Health. 2003 May. URL: http://www.findarticles.com/p/articles/mi_m0PAU/is_2_2/ai_107836731/print
14. Burt KB, Scott J. Parent and adolescent gender role attitudes in 1990s Great Britain. Sex Roles: A Journal of Research, April, 2002 . URL: http://www.findarticles.com/p/articles/mi_m2294/is_2002_April/ai_93701645