

that BP should continue to be checked prior to insertion but only annually at follow-up, unless specifically indicated.

In view of the number of removals associated with complaints of weight gain, the services decided to add to their guidelines that a baseline weight and body mass index (BMI) should be recorded prior to insertion.

Conclusions

This assessment has confirmed Implanon® to be a highly effective choice. Implanon®'s long duration of action and freedom from user intervention help to make it acceptable to most women who choose it.

The 'real life' 6- and 12-month continuation rates are reasonable in comparison with those found in clinical trials prior to the introduction of Implanon®.

The results have reassured the three services that they are providing a good standard of care to clients requesting Implanon® and have highlighted areas for improvement.

Acknowledgements

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Statements on funding and competing interests

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Competing interests. Both authors are trainers for subdermal implant techniques. SR has received payment from Organon when instructing. AS has received a grant of £400 from Organon toward psychosexual counselling training.

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A study on the knowledge and practice of contraception among men in the United Arab Emirates

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Abstract

Objective. To determine the knowledge and practice of contraception among United Arab Emirates (UAE) men.

Design. Cross-sectional survey.

Participants. Four hundred UAE monogamously married men with children.

Method. The participants were randomly selected from the community and interviewed about knowledge and practice of contraception using a structured questionnaire.

Results. A total of 348 men (87%) gave consent to participate in the study. Two hundred and ninety-four participants (84.5%) were aware of the availability of male contraceptive methods but only 94 (27%) were currently using these methods; 39 (41.5%) used condoms, 30 (31.9%) practised coitus interruptus, 24 (25.5%) practised the rhythm method and only one (1.1%) had been sterilised. Male contraception was accepted by 116 (33.3%) subjects of the total study population. The reasons for the objections

were: religious 133 (57.3%), cultural barriers 47 (20.3%), personal beliefs 29 (12.5%), medical disorders 18 (7.8%) and economical factors five (2.2%). Of 54 users of condoms and coitus interruptus, 16 (29.6%) reported to have experienced adverse effects that included testicular pain in six (37.5%), decreased libido in six (37.5%) and diminished orgasm in four (25%). There were significant associations between using male contraception and levels of education of the partners (male $p < 0.007$, female $p < 0.01$), low family size ($p = 0.0001$) and family income ($p < 0.05$). Fifty-seven subjects (19.4%) thought that a 'male contraceptive pill' is available and 44 (15.0%) believed that a monthly injection is available for men.

Conclusions. The level of awareness of contraception among men attending primary care in UAE is moderate. Two-thirds of the study subjects objected to the use of contraception by their wives and less than 20% practise contraception themselves. This is partly due to sociocultural traditions, religious beliefs and poor knowledge.

Key message points

- Contraception is not commonly used by UAE men because of sociocultural traditions, religious beliefs and poor knowledge.
- The commonest male contraceptive methods used were condoms and coitus interruptus followed by the rhythm method.
- There were significant associations between using male contraception and levels of education of both partners, low family size and family income.
- Nearly one-third of the users of condoms and coitus interruptus reported side effects and were bothered by the inability to have 'natural' sexual intercourse.
- Fifty-seven subjects (19.4%) thought that a 'male contraceptive pill' is available while only 44 (15%) were aware of male sterilisation.

Introduction

Family planning has benefited women by preventing many unplanned pregnancies and thus improving their quality of life by reducing the burden of uncontrolled fertility. However, the use of contraception is not consistent throughout the world; it can be high as 80% in developed countries and as low as 12% in sub-Saharan Africa.¹

Effective regulation of human fertility has global impact on resource depletion/preservation, pollution and poverty. Most of the current family planning services target the female client. Moreover, there have been few significant developments in male fertility regulation for over a century.² Hence men have not shared equally the responsibility of fertility regulation. The lack of male involvement may also reflect the limited options available to men. Current methods for men are either coitus-dependent, such as condom or withdrawal, or permanent such as vasectomy.³

Religious beliefs and culture are also important factors affecting the use of contraception. A study⁴ from Kuwait showed that the husband's opinion on contraceptive behaviour had a large impact. In this study, current contraceptive use was four times higher among couples where the husband approved the use of contraception than in those where the husband did not approve. On the contrary, in Turkey, many men are motivated to use contraception and share responsibility for family planning with their wives, and it was recommended that men should be treated as a specific target group for family planning programmes.⁵ There is some evidence from Africa⁶ to show that the attitude of the African male towards contraception has changed dramatically during the last three decades,

from ultra-conservative during the 1960s to very liberal in the later decades.

The United Arab Emirates (UAE) is a rapidly developing country situated in the Arabian Peninsula and has high standards of living due to its abundant natural resources. The majority of the population practise Islam, which is the state religion. The country attracts a large number of expatriate labour and UAE citizens form less than half of the population.

The UAE is a traditional Islamic society, and the acceptance of family planning methods is limited because of the cultural and religious importance of having children and the existing fiscal encouragement by the state for a big family. The literature on men's knowledge and practice of contraception from traditional Islamic communities appears to be limited. Hence we undertook the present study to investigate the knowledge, attitude and practice of contraception among UAE males.

Methods

A randomly selected group of UAE men who were monogamously married and had children were invited to take part in this cross-sectional survey. The Research Ethical Committee of the Faculty of Medicine and Health Sciences, UAE University, Al-Ain, UAE approved the study protocol.

The survey was divided into two phases with the following objectives:

(1) Pilot study: to ascertain the local name(s) used for different methods of birth control by UAE men and their attitude towards discussing this topic using structured interviews. The participants were men attending the primary health care centres at Al-Ain Medical District for reasons other than contraceptive counselling and included 50 successive patients seen at these centres.

(2) Community-based qualitative survey: to determine the prevalence of contraceptive practice in a community sample of UAE men of proven fertility and to collect general background information on factors such as knowledge, taboos and religious observances that may affect contraceptive use.

As the exact prevalence of contraceptive practice in the general fertile male population of the UAE is not known we assumed it to be 50%. Sample size calculation indicated that a study of 400 subjects was adequate to achieve a high degree of precision in estimating the true prevalence with our assumption.⁷ The study population thus consisted of a random sample of 400 monogamously married fathers attending primary health care centres and other community activity centres in four cities for a variety of reasons other than counselling for contraception. Between January 2001 and February 2001, 400 eligible men were recruited and 348 (87%) gave consent to participate in the study.

The data were collected by interviews administered by a trained research scientist using the structured and pre-tested questionnaire. The questionnaire used in the survey consisted of 26 items that included a number of demographic, reproductive and lifestyle variables and combined closed and open responses. Questions were generated from responses to the pilot study and modified accordingly. Relevant information such as education, income and income of the wife of married participants was also gathered. The questionnaires were available both in Arabic and English. Care was taken to keep the questionnaire answers anonymous and confidential.

The survey definition of 'using contraception' was 'any use of a method by the male partner after marriage with the

aim of controlling birth'. The definition of 'current user' was the use of contraception in the previous 12 months only and the 'previous user' was 'before 12 months'. Only current users were included in the study sample and previous users were classified as non-users. The number of wives was ascertained by questioning the male partner.

The data were analysed using the Statistical Package for the Social Sciences (Version 10; SPSS Inc., Chicago, IL, USA). Descriptive analysis including the calculation of mean, standard deviation and frequencies were carried out. Significance between categorical variables was tested using the Chi square (χ^2) test and a p value of less than 0.05 was considered significant.

Results

A total of 348/400 men participated in the study, giving a response rate of 87%. Table 1 shows selected sociodemographic characteristics of study subjects. The awareness of female contraception in general varied among participants (Table 2).

Table 1 Selected sociodemographic characteristics of study subjects (n = 348)

Characteristic	n (%) ^a
Mean age (years)	38.9 ± 10.5
19–29	61 (18.2)
30–39	123 (36.7)
40–49	98 (29.3)
50–59	38 (11.3)
≥ 60	15 (4.3)
Family income ^b	
< 5000	28 (8.3)
5000–15 000	151 (44.8)
15 000–25 000	105 (31.2)
> 25 000	53 (15.7)
Education	
University	157 (45.5)
Secondary school	124 (35.9)
Primary school	37 (10.8)
Illiterate	27 (7.8)
Smoking habits	93 (27.7)
Occupation	
Professional	227 (68.4)
Private business	71 (21.4)
Manual	24 (7.2)
Unemployed	10 (3.0)

^aRepresents the percentage of those individuals who provided valid information.

^bIn Dirhams per month (US\$ 1 = Dhs 3.678).

Table 2 Awareness of various contraceptive methods among UAE men^a (n = 348)

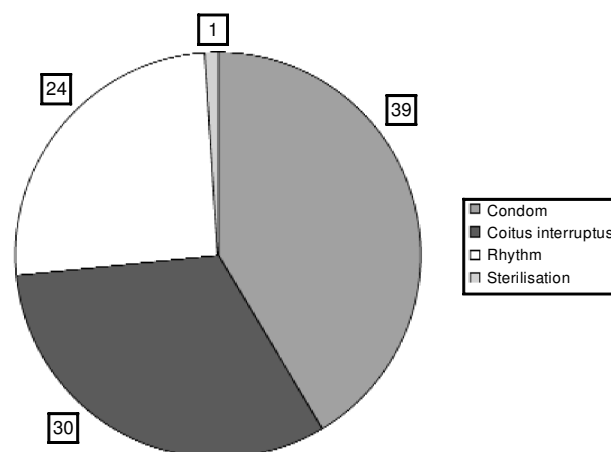
Type of contraception	n	(%)
Coitus interruptus	148	42.6
Barrier methods	133	38.2
Combined oral contraceptive	132	37.9
Rhythm method	109	31.3
Injectable	60	17.2
Sterilisation	49	14.1
Progesterone-only pills (POP)	43	12.4
Implants	21	6.0

^aOne subject could be aware of more than one method.

Table 3 Awareness of various contraceptive methods available to males among UAE men (n = 294)

Type of contraception	n	%
Coitus interruptus	127	43.2
Barrier methods (condom)	128	43.5
Male pill	57	19.4
Rhythm method	90	30.6
Monthly injection	44	15.0
Sterilisation	44	15.0

Figure 1 Type of male contraception used by subjects (n = 94)



Two hundred and ninety-four respondents (84.5%) were aware of the availability of male contraceptive methods, while 55 (15.5%) were not aware of any method of male contraception. Awareness of different male contraceptive methods is presented in Table 3. Interestingly, 56 (19.4%) of the respondents thought that a male pill is available for contraception and 44 (15%) believed that a monthly injection is available for male contraception.

When asked about contraceptive practice, only 94 respondents (27.0%) had practised any form of male contraceptive methods in the previous year of the survey; the distribution by method is shown in Figure 1.

In 163 (46.8%) couples the wife used contraception and in 145 couples (41.7%) she did not. Forty respondents decline to answer this question and there was no difference in age, education and income between those who answered and declined.

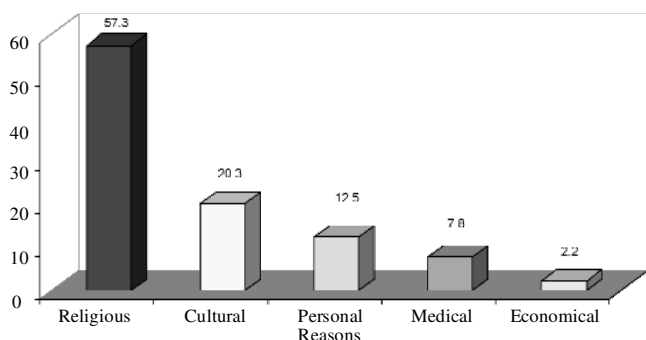
Use of contraception by the female partner to space and/or limit the pregnancies was supported by 166 (47.7%) of the respondents. Of those who disagreed and provided reasons they were as follows: religious belief in 96 (52.7%), cultural background in 22 (12.1%), medical disorders in 16 (8.8%), economical reasons in two (1.1%); 46 men (25.3%) did not provide any reason for their disagreement.

Use of male contraceptive methods in general was supported by 116 (33.3%) of the study population and 232 (66.7%) objected to its use. The reasons for disagreement are shown in Figure 2.

Of the 54 users of condoms and coitus interruptus, 16 (29.6%) reported they had experienced adverse effects that included testicular pain in six (37.5%), decreased libido in six (37.5%) and diminished orgasm in four (25%).

In the present study education level had an effect on use of contraception. Information on the use and education level was available for 256 subjects. Use of contraception

Figure 2 Reasons for disagreement with the male contraceptive method



increased with increasing levels of education [$\chi^2 = 12.0$, degrees of freedom (df) = 3, $p < 0.007$]. Only 16% of illiterate subjects used contraception, as compared to 44.4% of those with a university education. This positive effect was also noted with increasing level of wives' education. Thirty-six subjects (45.0%) with a university education used contraceptives as compared to four (18.2%) in the illiterate group, and the prevalence of contraceptive use was statistically significant by education of their wives ($\chi^2 = 10.5$, df = 3, $p = 0.01$).

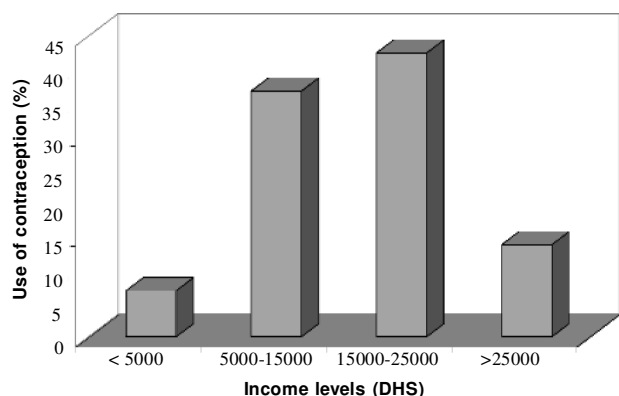
No significant effect of employment was noted on contraceptive use. In addition, unemployment level among the study subjects was low (2.9%). Only 12 couples (18.5%) practised contraception with a family size of more than five children, as compared to 65 couples (47.8%) with five children or fewer; this was statistically significant ($\chi^2 = 16.0$, df = 1, $p = 0.0001$).

An interesting association was noted between family income and contraceptive practice. Prevalence of contraception differed by income levels ($\chi^2 = 8.1$, df = 3, $p < 0.05$). The prevalence of use was lower in extremes of income levels; 6.9% in those with income less than 5000 Dhiraams (Dhs) per month and 13.8% with income over 25,000 Dhs (Figure 3). No effect of smoking habit was noted on contraceptive behaviour. The prevalence of contraceptive use was identical in smokers (37.5%) and non-smokers (36.2%).

Discussion

The present survey provides information about knowledge, attitude and practice of contraceptive methods in UAE males. As no sampling frame exists in the UAE to select a truly random, population-based sample, we therefore adopted the strategy of selecting subjects from primary

Figure 3 Use of contraception by income levels (n = 247)



care. Although this may not be fully representative of the community, this method has been commonly employed in the UAE. The UAE is a wealthy country and less than 10% have a monthly income of less than 5000 Dhs. This proportion was observed in the community. Only married men were included in the study as, in this culture, it is considered inappropriate to discuss these issues with unmarried men.

The programme of action globally endorsed at the International Conference on Population and Development (ICPD) emphasised the need for equity in gender relations and active involvement to promote reproductive and sexual health. If men are supported as equal partner and responsible parents, better outcomes are expected in reproductive health indicators such as contraception acceptance and continuation.⁸

Men must be classed as a political force that more often than not discourages the use of contraceptives by their women folk, largely because of fear of change in the power balance. The husband's opinion has had a very significant impact on contraceptive behaviour. For many poor women in developing countries their powerlessness in relation to their male partners is an important obstacle in contraceptive uptake.⁹

In our study 60.1% of the study subjects were aware of different forms of male and female contraceptive methods, but only 27.0% ever practised a male method. The majority of the subjects did not want to discuss male contraceptive methods.

The advent of reversible, long-acting contraceptives, intrauterine devices (IUD), injectables and implants has provided women throughout the world with valuable new fertility regulation options. These highly effective methods, together with male and female sterilisation, have proven to be enormously popular and are now used by the majority of women and men who are using contraception worldwide. In our previous study¹⁰ among UAE women, IUD was the most preferred method for long-term contraception. Vasectomy, a highly reliable, safe and permanent contraceptive method which has been accepted by approximately 42 million couples worldwide¹¹ (the majority of whom live in developing countries) had low acceptance among UAE men.

Islam plays a powerful role in the lives of its followers and is closely related to the cultural background of individuals. Large families are encouraged and some scholars even prohibit the use of contraception. This could partly explain the role of religion and culture.

Socioeconomic factors, particularly education, powerfully influence contraceptive use. More education is associated with better health outcomes. Women's educational status has also been linked to lower fertility rates. Women with more education are notably better able to take control of their own sexuality and family planning.¹² This finding was confirmed in our previous study,¹⁰ as contraceptive use increased with increasing educational levels. The present study also observed a significant positive association between female employment and contraceptive use. Economically speaking, women working away from home, and better-educated women, are more aware of their circumstances and want to take more control of their future and fertility. It is doubtful if women without education can take full advantage of contraceptive opportunities.¹² In Kuwait, which has a religious and cultural background similar to the UAE, use of contraception was found to be higher among couples who were better educated, where the wife was working, who

desired few children, lived in urban areas and belonged to a non-traditional ethnic group, i.e. non-Bedouin.⁴

A higher level of fertility has been associated with 'traditional' religious prohibition on some form of birth control, traditional values about the importance of children and the priority of the family. The UAE is among those societies in which social and religious rules have favoured the abundant production of children. In our study, 121 (40.61%) men have more than five children and among them 14 (18%) never practised any form of contraception.

Responsibility of contraception falls mainly on women being the wife's responsibility. Despite a reasonable level of awareness overall, i.e. 84.5% and a positive attitude to contraception, only a small proportion of men (27.0%) ever practised any male contraceptive methods. Economic factors were not found to be affecting contraceptive practice in lower and upper class populations in the study group, where nearly the same level of contraceptive use was found. However, a higher level of contraceptive use was noted in the middle-income population. This could be partly explained by the higher level of education and employment of the wives in this subgroup.

To our knowledge this is the first study of its kind in the UAE, and due to the rapid economic development and influence of the information revolution we anticipate that male contraceptive knowledge and use may change positively in the near future.

Statements on funding and competing interests

Funding. None identified.

Competing interests. None identified.

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F	Faculty	A CPD Self-Assessment Test
A	Aid to	
C	CPD	
T	Topics	
		ANSWER SHEET

Review No. 2002/04

To be reviewed not later than 31st December 2007

Bleeding problems and progestogen-only contraception

	<i>Answer</i>
1. Progestogen induces proliferative change in the endometrium.	False
2. Under the influence of synthetic progestogens, endometrial bleeding comes from the spiral arterioles.	False
3. Circulating progestogen levels are linked to the bleeding pattern.	False
4. When abnormal bleeding patterns are produced by the POP there is evidence to suggest that changing brands is helpful.	False
5. Bleeding problems with progestogen only methods improve with time.	True
6. Implanon [®] produces a higher rate of amenorrhoea than Depo-Provera [®] .	False
7. Women using the Mirena [®] IUS will ovulate normally in the majority of cycles.	True
8. Ethinylloestradiol is more effective than placebo in reducing bleeding side effects with Norplant [®] .	True
9. Oestrone is no better than placebo in reducing bleeding side effects with Depo-Provera [®] .	True
10. The use of oestrogen with the POP may affect contraceptive protection.	True