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SATISFACTION, REGRET AND COMPLICATION RATES AMONG IRANIAN VASECTOMISED MEN

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ABSTRACT

This study aims to find out satisfaction, regret and complication rates among vasectomised volunteers in Iran. Based on purposive and convenience sampling, 101 vasectomised men were chosen. A questionnaire was designed and validated by researchers consisting demographic and specific options. It was found that 95% of participants were satisfied with their operation and more than 95% still believed that their decision was correct. However, about 20% were suffering from sexual, physical, and mental difficulties. Volunteers through counselling should know enough about applications and aspects of positive and negative effects of this technique.

Keywords: *Satisfaction, Regret, Complication Rates, Iranian Vasectomised Men*

INTRODUCTION

More than 20 years ago, the International Conference on Population and Development (ICPD) recognized men's participation in reproductive and contraceptive responsibilities as vital for improving women's reproductive health worldwide (Gareth and Virginia, 2011; Hosseini and Abdi, 2012; Sandlow *et al.*, 2001). The worldwide increase in the acceptance of vasectomy as the most effective way of male family planning has naturally stimulated strong interest in the consequences of this procedure (Shih *et al.*, 2013; Shih *et al.*, 2011). Vasectomy is now a very common form of permanent birth control and an effective method of contraception that is widely accepted in both developed and developing countries. However, uncertainty persists about possible long-term adverse effects on health (Padhye and Karki, 2003; Dhar and Jones, 2007). Vasectomy is the most commonly used method of contraception in the United States; however, little is known on how to counsel these procedures or the knowledge of clients contentment (Padhye and Karki, 2003; Sandlow *et al.*, 2001; Shih *et al.*, 2013). Most surveys following vasectomy showed that sexual desire and satisfaction levels remaining at the same level or even greater (without the risk of pregnancy), and overall most men are satisfied with their decision on having a vasectomy (Eduardo *et al.*, 2005). In some studies it was generally reported that approximately 90% of surveyed men were satisfied with having had a vasectomy while between 7- 10% of men regretted their decisions (Ashis *et al.*, 2004; Ewalds-Kvist *et al.*, 2003; Rodrigues *et al.*, 2003; Wethelund and Nielsen, 1985). It is worth mentioning that a breakdown rate of this technique has been less than 1% in most reported operations (Hieu *et al.*, 2007). Long-term consequences, except regret, are hardly ever seen (Eduardo *et al.*, 2005; Rodrigues *et al.*, 2003; Hieu *et al.*, 2007). Also, regret after sterilisation, not only requires an expensive surgical procedure for recanalization, but also can affect the couples inter and intra-relationships (Laurance, 2009; Oats and Abraham, 2010; Randall, 2012; Jackson and Avant, 1982). In Iran, all modern contraceptive methods are available to married couples free of charge at public health centres. In 1990, to remove continuing doubts about the acceptability of sterilization as a method of family planning, the High Judicial Council declared that sterilization of men and women was not against Islamic principles or existing laws (Keramat *et al.*, 2011). The total population of Iran in 2006 was 70,495,782 persons. Also, in 2011 year the Iran population was 75 million and 150 thousand people. According to the 2000 report, vasectomy rate in Iran was 5% and Isfahan province is ranked first in the country (9.2%). Out of 55.4% couples aged 15- 44 years who used contraception, condoms and vasectomy accounted for only 7.3%. In Iran, there has not been an enough study on vasectomy procedure reporting the regret of the patients and only few long-term follow-up have been performed on focusing Iranian men. Therefore, this study intends to determine the satisfaction and regret rate among sterilized males and any vasectomy

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complication (Malekafzali, 2004; Farrokh-Eslamlou *et al.*, 2011; Roudi-Fahimi, 2002; Pile and Barone, 2009).

MATERIALS AND METHODS

Participants

According to the 2011 census, the total population of the city of Ardabil was 632,482 persons of which 271,362 were males. More than 3 thousand of these men have vasectomies. A quantitative cross-sectional research was conducted in Ardabil, Iran. Based on purposive and convenience sampling, 101 vasectomized men aged 32-66 were chosen from Shahid Beheshti health centre.

Instrument and Procedure

A questionnaire was designed and validated by researchers consisting demographic and specific items. Content validity was achieved through the expert's opinions including eight faculty members in health education, urology and midwifery. Reliability also was measured by Cronbach's alpha coefficient ($\alpha=0.74$). The questionnaire was revised based on experts' opinions. Data was collected using individual and face to face interviews with participants who at least passed one year after the operation.

Ethical Consideration

Before planning the detail of study, an official permission was taken from the ethical committee of the Ardabil University of Medical Sciences. The researcher introduced himself to the samples and the purpose of the study was explained to them. Each sample signed an informed consent form before the beginning of the interviews. The participants were assured that they could leave the research at any stage. Afterwards for more moral considerations, questionnaires were completed entirely privately. No one else vasectomized individuals and the researchers were aware of the content of the interviews and completing the questionnaires.

Data Analysis

Obtained data were analysed using descriptive and analytical statistics in Statistical package for social science version 16.

RESULTS AND DISCUSSION

Results

In this study, variables that contribute to satisfaction, regret and common vasectomy complications will be presented. The majority of the participants were living in urban areas. Vasectomized men and health staff were the most important sources of information about vasectomy (cited by 40% of respondents). Based on the results, it was found that 95% of vasectomized patients were satisfied with their operation, while about 20% were suffering from sexual, physical or mental problems.

Age: The results showed that the youngest vasectomized person was 32, oldest one had 66 years of age and the average age was about 45 ± 9.6 . The relationship between the age and the level of satisfaction was not statistically significant ($\text{sig} = 0.175$, $p < 0.05$). However, the trend shows a diverse range; when the age is higher satisfaction level is lower. At the age of 55, the proportion of satisfied and dissatisfied patients has been 3 to 1.

Education levels: Vasectomized person's literacy was ranged from illiterate to highly educated people, where the average literacy was determined around high school grades.

Living Areas: From 101 patients, 88 patients (87.1%) lived in the cities and 13 patients (12.9%) lived in the countryside and town. It was found that the relationship between the place of residence and the level of satisfaction is statistically significant ($p = 0.001$). In this regard, 13% of people living in rural areas were not satisfied with their vasectomy operation, while just less than 3% of patients living in the city expressed dissatisfaction.

Type of employment: 40 patients (40.8%) were civil servants and 61 patients (59.2%) were self-employed. In general, most of the villagers and motorists experienced more post-operative complains.

Postoperative pain: It was found that 21 of respondents (20.8%) had reported their pain to the professionals of health centre. A significant correlation was found ($p = 0.05$) between postoperative pain

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and satisfaction level. Moreover, 15 patients (18%) of those who experienced postoperative pain were dissatisfied with vasectomy, while only one patient (1.5%) without pain was dissatisfied with the operation itself.

Complications of vasectomy: In the present study, 22 respondents (21.8 %) stated that they had complications after vasectomy. The complained subjects about their vasectomy were included impotence (n=5), premature ejaculation (n=5), groin pain when doing heavy work (n=4), lumber and joints pain (n=4), granuloma (n=3), itching of the body (n=3) especially the scrotum (one person suffered from severe itching practice and perinea region so much that he had referred to a specialized physician), mild and moderate depression (n=3), small and shrinking testicles (n=2), hair turning grey (n=2), premature hair and large scrotum (n=2), respectively. Also, it was found that a patient suffered from breath shortness. Finally, 21.8% of people expressed that their mental health has been deteriorated after vasectomy operation.

Early or late complications after vasectomy: A total of 28 patients (27.7%) reported that they had postoperative complications, when 73 patients (72/3%) expressed that they did not have any complications so far. In addition to this, with regard to the pregnancy of their partners, there was not even a single report.

Time lapse since the vasectomy: The time lapse after the vasectomy was at least 4 years and 9 years at the most and the mean time-lapse since the vasectomy was 6 years.

Accuracy of the decision (vasectomy): It was found that more than 95% still believe that their feeling and expression about the information given in the survey was correct and these patients made accurate decisions. Almost all of them recommended the operation to other people.

Discussion

One way to achieve healthy families, communities, and societies is to take population control and family planning seriously. In society, the burden of family planning is largely on the shoulders of women and men by the use of condom and withdrawal methods participating in the family planning programs. On the other hand, several forms of contraceptives have undesirable complications for women, or are not affordable in view of cost-effective matter. Thus, vasectomy is used with more and more general interest. Worldwide, approximately 3-6% of couples are using vasectomy as a method of contraception¹⁷. These results increase the participation rate of men in vasectomy. Although vasectomy in such countries as the US, Canada and New Zealand has a high approval rate, the country such as Islamic Republic of Iran has not far gone through the performance of this technique. Therefore, it received the lowest rating among the contraceptive methods (Shih *et al.*, 2011; Randall, 2012). The results of the present study showed that 95% of vasectomised men are satisfied with their operation, while about 20% are suffering from sexual, physical or mental problems. Additionally, the findings of currents study indicated that the majority of men after surgery reported scarring, pain, irritation and swelling. In this study vasectomised respondents have reported pain mainly after the third day of operation, but occasionally after a week pain and soreness are alleviated. Some of them have also complained about chronic testicular pain. Swelling and irritation always started immediately after surgery and the patient's irritation continued even after 2 weeks in some cases. In some cases, testicular bags subcutaneous haemorrhage and hematoma were observed. Furthermore, discharge of bloody semen during the sexual intercourse was reported. These findings correspond with the results of Ashis, Oats and Abraham, Farrokh-Eslamlou and Sokal (Ashis *et al.*, 2004; Oats and Abraham, 2010; Farrokh-Eslamlou *et al.*, 2011; Sokal *et al.*, 2004). In the present study, 22 patients (21.8%) stated that they had complications after vasectomy. This finding is less than the results reported by Najafi and Rakhshani (2008). According to their research, 37% of men have had complications. It was in correspondence with the results of Morris and colleagues as well (Morris *et al.*, 2002). The study by Santiso et al reported that 40% of people in the first few days after surgery suffered from testicular pain or inflammation (Santiso *et al.*, 1981). However, in the present study, 21 patients (20.8%) referred to a health centre following of the difficulties. Indeed in the group of vasectomised people, testicular pain is supposed as a normal phenomenon. Schwing and Guess studied and discovered that the efficiency and complications of vasectomy depends on the various experience of the surgeon and

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on the surgical techniques (Schwing and Guess, 2001). Early complications including hematoma, infection, sperm granuloma, epididymitis, orkitis and congestive epididymitis in 6-1% of patients were seen. This finding is not consistent with the results obtained by Rodrigues and colleagues (2003). Approximately 93% of those surveyed stated that their health had improved; only seven per cent of the patients have reported deficiency or unimproved health, which was comparable with the findings of Islam and Rahman (1993). According to their research, the health of 80-85% of those who were vasectomized has not improved or changed and 12% reported that their health worsened or was damaged. Perhaps it is due to a better level of health care in Iran than Bangladesh. Approximately 87% of those surveyed stated their mental health increased after operation, while about 22% stated that the mental health did not change or even worsened. This rate is lower than the results reported by Jackson (1982) and Ewalds-Kvist (2003). In their report, 28% stated that their mental health has deteriorated. A small percentage of complaints were about depression and anxiety, and some perhaps even suffered from a lack of health condition. About 20% complained about sexual problems such as impotence, premature ejaculation and loss of libido. There is also the strong argument given by Rodrigues *et al.*, (2003); Boorjian *et al.*, (2004); Ewalds-Kvist *et al.*, (2003) that vasectomy has no negative effect on sexual ability. Accuracy of the decision was matched with the results of Dhar (2007) and Rodrigues *et al.*, (2003). The majority of studies from developed countries indicate a high level of satisfaction with vasectomy. Regret is rarely reported by more than ten per cent of respondents in reviewed literatures (Najafi and Rakhshani reported 17%). In this study regret rate was five per cent. Studies have shown that regret is related to procedure failure, to perceived negative effects on health and sexuality. Unpredicted life events, like a change in marital status or the death of a child, are also sources of regret (Boorjian *et al.*, 2004; Romero Pérez *et al.*, 2004; Amy, 2009). Thus, in this study, three clients seek seriously recanalization that matched with Wethelund and Nielsen (1985) study but was less than from Goldstein (2002) study outcome.

Conclusion

Vasectomy is a safe and efficient method of family planning and many people undergo the vasectomy surgery; however this method is not without physical and psychological complications. In the other word, the vasectomy seems to be effective in prevention of fertility but further examinations are needed to measure long-term impacts and complications. As some clients who have vasectomy operation suffer from vasectomy side effects and are regrets; therefore, if the subjects do not get enough advice and is not prepared well for the operation, the side-effects of vasectomy will be exposed and subsequently the subject will regret having the operation. In this study more than 95% of the patients were satisfied with their operation and the rest were dissatisfied.

Limitations

The reasons that problems occurred during this period were due to the fact that some clients sold or changed their homes, changed the addresses, were on trips or missions, or were not available in the frequent reference because of a night-shift job and rest. Some took the questionnaire but were too busy and to submit it later to the health centre. Plus, complications were told by clients not by medicine examination.

Authors' Contributions

All authors read and approved the final manuscript. H.M and Y.HA conceived the study and participated in the design, data collection and data analysis as well as preparation of the manuscript.

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Conflicts of Interest

The authors declare that there is no conflict of interest.

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