
Investigating Level of Knowledge, Attitudes and Practices of Health Personnel in Larestan regarding Andropause in 2010

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Abstract

Background and Aim: Andropause in men refers to a condition similar to menopause in women which is associated with decreased level of testosterone and Leydig cells. The results of research have shown that there is still low level of awareness and attitudes towards Andropause among health professionals. Therefore, this study aimed at assessing the level of knowledge, attitudes and performance of Larestan health care personnel regarding Andropause in 2010. **Materials and methods:** This study is descriptive - analytic. Sampling was done by census method. Data gathering tool was a researcher-made questionnaire for assessing knowledge, attitude and practice of nursing and medical staff regarding Andropause. Using SPSS 16. Descriptive statistics and t-test were used for data analysis. **Results:** The mean scores of knowledge, attitudes and practice in relation to Andropause among nursing staff were significantly lower in contrast with practitioners. Comparison of the mean scores for knowledge and practice in the two groups was statistically significant difference ($P < 0.001$). But there was not a statistically significant difference the attitude scores ($P = 0.84$). **Conclusions:** Given the importance of men's health, lack of knowledge, attitude and stated practice about Andropause among members of the health care teams, it seems essential in teaching about it in academic programs.

Key words: Andropause ,knowledge, attitude, performance, health care personnel

Introduction

Menopause in men (Andropause) refers to a condition similar to menopause in women which is associated with decreased level of testosterone and Leydig cells. After 30, testosterone level is decreased by one percent each year and causes symptoms such as mood and behavioral changes, cardiovascular problems, decrease in body mass, osteoporosis, weakness and back pain .(James,2007).

Andropause in men leads to night sweats and palpitations due to increased activity of the autonomic system, which occurs in response to decreased testosterone levels (Tan, 2001).

Andropause typical symptoms in some studies include 82% fatigue and reduction in a feeling of wellness, 60% joint pain and stiffness, 50% sleep disturbances and fever, 70% depression, 60% irritability and anger and decreased libido 80% (Carruthers, 1997).

Research has shown that one out of eight men over 50 suffer from osteoporosis. Decreases bone density puts men at risk of fractures (Sweet, Sweet, Jeremiah, Galazka,2009). The most common diseases of male menopause are the increased risk of prostate cancer, bone loss and cardiovascular diseases (Tan, 2001). Employment conditions, economic factors, daily stress, divorce or loss of spouse, diet and exercise are among affecting quality of male menopause (Mohebbi,2009). Causes, symptoms and treatments associated with Andropause are reported in the literature, but knowledge of the medical team is not enough (Pommerville , Zakus,2006)). Fatusi et al (2003) conducted a study to assess Andropause awareness and erectile dysfunction among married men in Nigeria. Data were gathered by a questionnaire based on the review of the International Index of Erectile Dysfunction. The study involved 355 married men, aged between 30 and 70 years. The results showed that prevalence of erectile dysfunction increased significantly with age, varying from 38.5% for age 31-40 years to 63.9% for the older age group of 61-70 years ($p < 0.05$). The findings indicate a need for health education about andropause in Nigeria, and increased attention to the reproductive health concerns of males, and the older population.

Thousands of men have always struggled with anxiety in the course of their lives but they do not know the reasons. In addition, Andropause is a new phenomenon in scientific research which has recently attracted experts. Therefore, little information is available in the form of books and journals about the issue (Mohebbi,2009). Awareness of different needs of Andropause particularly sexual needs is an important issue in quality of life. (Morley, Pathy, Sinclair,2006). Yan (2009) conducted a study to investigate awareness and knowledge of andropause among Chinese males in Hong Kong. A sample of 500 individuals at the age $>$ or $=40$ years participated in the survey. The data were gathered using a structured questionnaire. 88.2% of men believed that andropause was a natural aging process. The andropause-enlightened respondents had poor knowledge with the mean knowledge score of 5.94. The majority identified irritability (72.5%), loss of energy (66.5%), and loss of libido (60.7%) as symptoms.

Andropause threats for marital life are among the causes of problems in the family. The results of research have shown that there is still low level of awareness and attitudes towards Andropause among health professionals. Undoubtedly, tailored actions and strategies must be used about Andropause and reproductive health of men in the community (Morley, Pathy, Sinclair , 2006).

Fatusi et al (2004) conducted a study to assess the impact of demographic - social factors on knowledge and attitude towards Andropause among 184 men. Young people under 40 years had higher awareness than the rest ($P < 0.001$) and doctors and health team were also more aware than others. In this study, only 23% had a positive attitude about Andropause. Knowledge had a positive impact on their attitude, but none of demographic characteristics was significantly related to their attitude.

Reyes et al (2004) conducted a study to assess male aging in the Philippines. In this study, the majority of doctors (about 87%) thought that men may experience andropause. 77-70% of the health care team were aware of a syndrome called androgens decline and only 50 percent were familiar with the term irritable male syndrome (Reyes and et al.2004).

Lapitan and Lim (1999) conducted a study on Awareness of male menopause and attitudes towards information and management among 379 respondents with a mean age of 53.3 years in Singaporean. The results showed that a very high proportion of the respondents expressed interest in acquiring more knowledge on the condition and its treatment, citing booklets and leaflets as the preferred mode of gaining this information. Approximately one-fifth of the respondents were not keen on seeking treatment for male menopause for fear of side-effects.

Symptoms associated with Andropause are obscure and varied and their trend is gradual and slow. Most doctors and health care workers pay less attention to decreased testosterone due to non-specific Andropause symptoms. Symptoms are linked to other mental and physical problems and, as a result, appropriate treatments are not provided. The importance of men's health, serious problems caused by Andropause, and insufficient studies and research in this area are among the incentives for us to conduct this study which can pave the way for providing strategies for promotion of men's health and increasing attitude and behavior of health care providers. Therefore, this study aimed at assessing the level of knowledge, attitudes and performance of health care personnel regarding Andropause in 2010.

Materials and methods

This study is descriptive - analytic. Sampling was done by census method. That is, the study population include all nurses in undergraduate, associate and assistant programs employed in Imam Reza (AS) hospital in Lar, Iran, amounting to a total of 90 people, and all the general practitioners and specialists both in private and public institutions, amounting to 47 people. Finally, 75 nurses and 19 doctors accepted to participate in the study. Data collection instruments for this study consisted of a researcher-developed questionnaire for assessing knowledge, attitude and practice of nursing and medical staff regarding Andropause. The nursing staff questionnaire includes demographic items and 3 groups of items regarding Andropause KAP. Seven items are about awareness scored based on a 3-point Likert scale with a maximum score of 2, a minimum score of zero, and the total score of 48. Five items are about attitude scored based on a 5-point Likert scale with a maximum score of 4, a

minimum score of zero, and the total score of 25. Questions related to the performance are administered in a checklist that consists of 11 items with a maximum score of 1 and a minimum of zero.

The practitioners' questionnaire was used for assessment of knowledge, attitude and performance of practitioners. Six items are about awareness scored based on a 3-point Likert scale with a maximum score of 2, a minimum score of zero, yes/no questions of 1 and 0 scores and the total score of 38. Six items are about attitude scored based on a 5-point Likert scale with a maximum score of 4, a minimum score of zero, and the total score of 30. Three questions related to the performance with a maximum score of 1 and a minimum of zero are administered in a checklist. After informed consent, the questionnaires were completed by nurses and doctors.

The questionnaires were developed based on the study of books and resources available. In order to determine the validity, they were investigated by 10 faculty member professors at Shiraz Medical Sciences University and appropriate modifications were made. In order to

assess the reliability, test-retest method was used. The questionnaires were administered to 20 nurses and doctors. After 2 weeks, they were re-administered to the same subjects and the data were analyzed. Finally, the reliability was confirmed by Cronbach's alpha of 84%.

Data obtained from the questionnaires were analyzed using SPSS 16. According to the type of variables, t-test, ANOVA and descriptive statistics were used.

Results

Average age of staff was 33.36 ± 0.95 . 89.3 percent of nurses were female and 10.7 percent were male. From practitioners, 78.9 % were male and 21.1 percent were female (Table 1).

Average professional experience of participants was 10.68 years for nurses and 12.84 years for practitioners.

Table 1: Demographic characteristics of subjects

	Nursing staff			Practitioners		
		Number	Percent		Number	Percent
Education	Undergraduate	57	76	GP	8	42.1
	Assistant	18	24	Specialists	11	57.9
Marital status	Married	49	65.3	Married	16	84.2
	Single	26	34.7	Single	3	15.8

The mean scores of knowledge, attitudes and performance in relation to Andropause among nursing staff were significantly lower than the total scores of knowledge ($p < 0.01$), attitude ($p < 0.001$) and performance ($p < 0.001$).

There was no significant difference between mean score of knowledge and understanding in both females (10.5 ± 3.9) and males (10.5 ± 1.3) ($P = 0.9$). The mean scores of knowledge for undergraduate and assistant nurses showed no significant difference ($P = 0.2$). This can be a result of lack of academic training at the university level programs.

No statistically significant difference was found between mean scores for college students of varying degrees ($p = 0.6$) and marital status ($P = 0.2$).

There was a positive correlation between professional history and attitude about Andropause which was significant ($p = 0.04$), which means that with an increase in professional history, the Andropause attitude grew better. There were no statistically significant relationship between knowledge, understanding and attitude with marital status of the participants in the study.

The correlation between knowledge and attitude towards Andropause was also positive and statistically significant ($P < 0.001$). There was no significant association between knowledge and attitudes and stated practices with other demographic characteristics.

General practitioners' and specialists' knowledge about Andropause related terms included 52.6% wrong and 47.4 percent don't know. None of them knew about Andropause synonyms. About Andropause definition, only 36.8 percent responded correctly. Regarding the effect of Andropause on various body systems, the majority of practitioners had a high related knowledge and understanding (94.7 percent). But only 52.6 percent acknowledged the impact on the musculoskeletal system, 6.52 percent. 78.9 percent acknowledged the impact on mental condition, 52.6 percent acknowledged the impact on Cardiovascular System and 68.4 percent acknowledged the impact on muscle system.

Another finding of this study was that practitioners' attitude about Andropause was high (84.2 percent) they believed that Andropause significantly affect quality of life.

The results of the present study showed that practitioners' knowledge about diagnostic methods of Andropause was 84.2 percent and only 57.9 percent answered correctly to items related to Andropause treatment. 10.5 % of practitioners did not know about any of the therapies and diagnostics.

Regarding knowledge of the problems associated with Andropause, only 57.9% of practitioners had accurate and complete information. Only 6.31 percent noted mental and skeletal complications and 10.5% were unaware of the possible problems of Andropause for the cardiovascular and skeletal systems.

The maximum score of practitioners was 38 for knowledge, 30 for attitude and 40 for performance. There was no significant difference between mean scores of attitude, knowledge and stated practice of general practitioners and specialists ($P = 0.2$). There was also no significant difference between demographic characteristics, and mean scores of knowledge, attitude and stated practice.

Comparison of the mean scores for knowledge and stated practice of the nursing staff and practitioners demonstrated a statistically significant difference between these groups ($P < 0.001$), while There was no significant difference between the mean scores on the attitude of the nursing staff and practitioners ($P = 0.84$).Table 2.

Table 2: The Results of Independent Sample T-test, Comparison of the mean scores knowledge practice and attitude nursing staff and practitioners to Andropause .

dimension	nursing staff		practitioners		P-value
	mean	SD	mean	SD	
Knowledge	10/5	0/43	12/63	0/65	P< 0/001
Attitude	2/5	0/14	2/75	0/25	P = 0/84
Practice	1/2	0/·4	6/84	0/46	P< 0/001

Discussion

This study examines the level of knowledge, attitudes and practices of practitioners and nurses about Andropause. The results showed that the knowledge of the nursing staff about Andropause is low. In this regard, the study by Anderson et al (2002) in America investigated knowledge and perceptions among the general public and health care professionals and found similar results. HCPs and members of the general public have misconceptions about some aspects of Andropause and educational initiatives are needed.

There was a statistically significant positive correlation between professional records and attitude about Andropause ($P = 0.04$), which means that subjects with higher professional records had a better attitude towards Andropause. There was no significant relationship between knowledge and understanding, attitude and marital status of the study participants. However, Taher's (2005) study in Indonesia found that the degree of andropause and marriage status can affect the acceptance of andropause. The more severe the degree of andropause, the more they cannot accept the conditions Andropause grade.

Other findings from the survey were the investigation of general practitioners and specialists knowledge regarding andropause effect on various systems of the body. The results indicated that 56% of the answers regarding jargons associated with andropause were wrong. Knowledge and understanding of the majority of physicians (7/94%) regarding the effectiveness of physical activities were high In terms of andropause effect on various systems of the body. These results are similar to results of Adebayo et al 2007. In that study, 1/45 percent of participants had no knowledge of andropause. But 96 percent had experienced a wide variety of physical changes associated with andropause. It seems that the majority of doctors and even the general public consider menopause especially for women. However, regarding the andropause effect on various systems of the body, Although the level of physician's knowledge is relatively high there is not any plan to raise the public awareness about the effects of andropause in teaching hospitals. It can be deduced that perhaps the formulation and implementation of educational programs at universities and hospitals reduce the gap between theoretical and practical discussions and raise awareness within the community since having just knowledge of the health system is not enough and the needs to change its attitude and action must occur.

Another finding of this study was that practitioners' attitude about Andropause was high (84.2 percent) they believed that Andropause significantly affect quality of life. Novák et al's (2002) study in Netherlands found similar results. In this study, they indicated that seven key domains (energy, emotional, social, social emotional, mental functioning, physical functioning and sexual functioning) should be considered when assessing the impact of andropause. They found that understanding the impact of low testosterone levels on QoL is critical to diagnosis and effective treatment of Andropause. In stddy of Holm and Fredrikson (2011), more than half believed that a 'male climacteric' was related to decreased libido and less strong erections. Almost half of the men thought that decreased memory and/or dystymia and anxiousness were related to a male climacteric. Novak (2002) found similar results on

this point. Both practitioners and patients deemed reduced energy and sexual dysfunction among the impacts of Andropause.

The results of the present study showed that practitioners' knowledge about diagnostic methods of Andropause was 84.2 percent and only 57.9 percent answered correctly to items related to Andropause treatment. 10.5 % of practitioners did not know about any of the

therapies and diagnostics. In this regard, the study by Anderson et al (2002) found that of 98% health care team and 91% of the public believed that low testosterone is treatable with medication. Tan (2001) obtained similar results in America. In that study, 34% noted the importance of testosterone in cognitive performance and it was proposed that hormone therapy is essential to reduce dementia.

Regarding knowledge of the problems associated with Andropause, only 57.9% of practitioners had accurate and complete information. Only 6.31 percent noted mental and

skeletal complications and 10.5% were unaware of the possible problems of Andropause for the cardiovascular and skeletal systems. Schwarz et al (2011) stated in their study that although andropause is correlated to aging, a causal relationship between reduction of androgens and the development of chronic diseases such as atherosclerosis and heart failure has not been convincingly established yet. On the other hand, increasing data has emerged that revealed the effects of low levels of androgens on cardiovascular disease progression. Anderson et al (2002) stated that 60% and 57% of HCPs and members of the general public knew that low testosterone results in osteoporosis.

Comparison of the mean score of nurses and practitioners' knowledge and stated practice showed a significant difference between the two groups ($P < 0.001$), while the mean score on the attitude of the staff and practitioners were not significantly different ($P = 0.84$). Pommerville et al (2006) conducted a relevant study in Canada. The findings of this study do not confirm our results. In that study, a large percentage of practitioners had a relatively high knowledge (96.3%) about Andropause and believed the experience was similar in men and women. 98 percent associated Andropause with an increased risk of osteoporosis. 91.5% of them knew about prohibition of hormone therapy in conditions such as prostate cancer. However, more than half of the physicians (57.4 percent) noted the lack of educational resources in the field and obstacles for understanding Andropause. This study suggested that constant medical education is essential for Andropause diagnosis and treatment. Tan et al (1999) also confirmed that Andropause is experienced by many people, but they have little knowledge in this regard. In this study the risk factors associated with Andropause were studied. Tobacco consumers are at a high risk of Andropause.

It is noteworthy that the majority of subjects in their initial encounter with the research questionnaires and topic were biased about introduction of "Andropause" and believed it was bogus, false and shameful and stated that the issue is trivial and false for research and comment. Harrison (2011) noted in his study that the experiences of men suffering from the andropause today are reflective of menopausal women some 20 or 30 years ago which shows ignorance and fear of the andropause condition. He recommended that men in the andropause identify a 'champion' to assist their cause. This will help in gaining greater recognition and

understanding of the condition and attract the most appropriate treatment. Holm and Fredrikson (2011) also found similar results in this regard. In this study, 65.4% of the Swedish responders had heard of a 'male climacteric', and 42.2% believed it existed but only 3% had sought medical advice for these symptoms. Adebajo et al (2007) showed that most of participants from Lagos, Nigeria were indifferent about the symptoms they experienced, as they were accepted as a normal phase of the aging process. Among the results opposing ours are those found by Taher (2005) in Indonesia. Taher noted that 64.97 % of those who experienced Andropause accepted it.

Conclusions and suggestions

This study aimed to demonstrate the importance of addressing men's health. However, given the descriptive nature and small sample size, it is recommended that more intervention studies with larger sample size in this regard be carried out. The research instrument is a self-developed questionnaire which has its own disadvantages and restrictions.

Given the importance of men's health, lack of knowledge, attitude and stated practice about Andropause among members of the health care teams, it seems essential in teaching about it in academic programs.

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