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Menopause between nature and culture: menopausal age and climacteric symptoms among Turkish immigrant women in Vienna, Austria

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Background. Age at menopause and the degree of severity of the climacteric syndrome was analyzed among 33 Turkish immigrant women living in Vienna, Austria.

Methods. Regarding the evaluation of the climacteric complaints the Menopause Rating Scale was used.

Results. The average age of the menopause was extremely low (x = 44.8), and 16.7% of the subjects had experienced natural menopause before their 40th birthday. The majority of women suffered from severe climacteric symptoms. This was true of the total score as well as of the psychological domain, the somato-vegetative domain and the urogenital domain. The degree of severity was only influenced by the number of births, not by chronological age, educational level, and duration of stay in Vienna or prior use of hormone replacement therapy.

Conclusion. Immigrant status seems to cause stress which influenced the onset of menopause and the course of the climacteric negatively.

Key words: menopausal age, immigrant women, climacteric

INTRODUCTION

Menopause, the cessation of menstrual function and the irreversible termination of female reproductive capability is a universal biological phenomenon affecting all the middle-aged women. The physiological mechanism responsible for menopause is the continuous loss of ovarian follicles to that point at which menstrual cycles completely cease. Finally, one part of the hypothalamus – pituitary-ovarian system – breaks down as the ovaries become depleted of follicles (1). About 5 years prior to menopause the serum levels of FSH and LH increase significantly (2), the serum levels of estradiol and estrone, however, decrease markedly. From a medical point of view these hormonal shifts are associated with various symptoms such as hot flashes, insomnia, depressions, muscle-joint-bone pains or problems of the urogenital system. Therefore, climacteric discomfort was interpreted as a medical condition caused by hormonal depletion, especially estrogen depletion during this phase of female life. During the last three decades in the majority of westernized industrialized countries hormonal replacement therapy seemed to be the only appropriate way to help women during menopausal transition, because menopause itself was interpreted as a disease making female life during the fifth and sixth decade uncomfortable. From a biological point of view however, menopause is a natural part of female life, and not a disease. Menopause and post reproductive phase of life might be favoured by natural selection in a number of ways. On the one hand, menopause ensures that mothers are young enough to survive pregnancy, birth and early childhood of their offspring (3). Furthermore, menopause ensures that old oocytes are not fertilized (4) and saves the costs of maternal energy (5). The most prominent evolutionary hypothesis explaining the emergence of menopause is the so-called grandmother hypothesis. According to this hypothesis, females stop reproduction early and invest in their grandchildren. So they contributed more genes to the population gene pool by investing in their grandchildren than they could have contributed by continuing to produce children of their own (6). Nevertheless, menopause is also a complex biosocial and biocultural process (7). The individual experience of this stage of life depends on variations in psychological, social and cultural factors. Female midlife is in general associated with physiological, first of all endocrine, as well as social changes, making menopause a physiologically and psychologically stressful time of life. Several studies have shown that psychological, typical cultural stress may influence the age at menopause and affect the climacteric symptomatology (8). A particularly vulnerable group includes midlife and older immigrant women, who tend to have high levels of psychological distress (9). The aim of the present study was to analyze the impact of this special kind of distress during midlife during the onset of menopause and the course of the climacteric. Over the last few decades Austria has undergone a change from a more or less homogeneous society to the one of many different cultures and traditions. The increasing number of immigrants has brought health problems of different ethnic groups into focus. In the present paper the results of a pilot study concerning age at menopause and climacteric symptoms among Turkish immigrant women in Vienna are presented.

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MATERIAL AND METHODS

Probands. 33 Turkish immigrant women ageing between 37 and 73 years (x = 53.6 ± 8.7) were enrolled in the study. All the women were born in Turkey, their migration to Austria occurred at a minimum interval of 4 years prior to the present investigation. For comparison, the data of 98 healthy Austrian women ageing between 39 and 64 years (x = 54.8 ± 8.1 years) were collected.

Procedure. The women were contacted in Turkish cultural clubs and then recruited via snowball system. Interviews took

Table 1. **Comparison of age at menopause**

Sample	n	Age at menopause (x)	Study
Present sample	33	44.8	Kilaf & Kirchengast 2007
Turkey (Anatolia) rural	761	44.4	Discigil et al. 2006 (21)
Turkey (Central Anatolia)	646	45.8	Biri et al. 2005 (20)
Turkey Istanbul	845	47.0	Vehid et al. 2006 (24)
Turkey Pamukkale	171	47.4	Özkan et al. 2006 (29)
Turkey Ankara	1500	47.8	Carda et al. 1998 (22)
Turkey Isparta	157	50.8	Aydin et al. 2005 (23)
United Arab Emirates	742	47.3	Rizk et al. 1998 (30)
Austria	98	51.7	Kilaf & Kirchengast 2007
USA Mass.	293	52.6	Reynolds & Obermeyer 2005 (31)
Australians (whites)	5593	51.0	Do et al. 1998 (32)
Italy	863	49.4	Parazzini et al. 1992 (33)
Netherlands (Utrecht)	4686	50.2	Van Noord et al. 1997 (34)
Venezuela	167	48.9	Reyes et al. 2005 (35)
New Guinea (Papua)	187	45.4	Scragg et al. 1973 (36)
Philippines (Agta)	–	44.0	Goodman et al. 1985 (37)
Botswana (!Kung)	–	47.5	Howell 1979 (38)

Table 2. **Comparison of the degree of severity of the MRS total scores and 3 domains. Prevalence of percentage of the present sample and population samples (Heinemann et al. 2004)**

	Turkish sample	Europe	North America	Latin America	Asia
Total score					
No (0–4)	6.5%	28.8%	28.0%	31.0%	40.2%
Mild (5–8)	3.2%	21.9%	23.9%	20.2%	27.5%
Moderate (9–16)	19.4%	2.1%	25.7%	26.2%	22.8%
Severe (>16)	71.0%	24.3%	22.5%	22.7%	9.5%
Psychological domain					
No (0–4)	9.4%	35.4%	36.8%	36.8%	41.3%
Mild (5–8)	3.1%	21.8%	21.9%	21.9%	25.4%
Moderate (9–16)	15.6%	19.5%	18.7%	18.7%	21.3%
Severe (>16)	71.9%	23.4%	22.5%	22.5%	12.0%
Somato-vegetative domain					
No (0–4)	6.5%	39.5%	37.9%	42.1%	46.8%
Mild (5–8)	16.1%	22.6%	2.6%	19.4%	27.0%
Moderate (9–16)	12.9%	24.2%	24.3%	25.6%	20.8%
Severe (>16)	64.5%	13.7%	12.1%	12.9%	5.4%
Urogenital domain					
No (0–4)	21.9%	34.3%	33.4%	28.2%	55.6%
Mild (5–8)	6.3%	17.2%	17.0%	18.6%	18.6%
Moderate (9–16)	9.4%	23.0%	24.2%	21.8%	17.0%
Severe (>16)	62.5%	25.6%	25.4%	31.4%	8.8%

place in private homes or culture clubs and were carried out by one author (E. Kilaf). None of the probands was interviewed at a gynaecological out-patient department or in consulting rooms of medical doctors.

Socioeconomic parameters and reproductive history. By means of structured interviews information regarding civil status, educational level, profession, duration of stay in Austria, language ability was gathered. Additionally, the number of births and pregnancies was recorded. Furthermore, information regarding the kind of menopause (natural vs. artificial menopause) and the history of hormonal replacement therapy were collected.

Age at menopause and climacteric symptoms. Age at menarche was estimated using retrospective method. This was also true of the age at menopause. Age at menarche and age at menopause were defined as the chronological age at the closest birthday.

In order to evaluate the degree of severity of various typical climacteric symptoms in the present study, the Menopause Rating Scale (MRS) according to Heinemann et al. (10) was used. The Menopause Rating Scale is a standardized HRQol scale with a high reliability. Its use in many countries offered the possibility to compare the menopausal symptomatology across countries.

Statistical analyses. Statistical analyses were carried out by means of SPSS program version 13. After computing descriptive statistics (means, standard deviations, range) group differences were tested by Duncan analyses and Chi-squares with respect to their statistical significance.

RESULTS

Socioeconomic characteristics of the sample. The great majority (75%) of the subjects have been living in Vienna for more than 20 years, while, in contrast, only 12.5% of the women migrated to Vienna less than 5 years ago. The educational level of the subjects was in general low. Nearly 18.8% had not finished school, 56.3% had only finished primary school. Secondary school was finished by 15.6%, and only 9.4% had attended a technical college. The number of offspring was high, only 6.3% of the women had never given birth. The majority of women (56.3%) had given birth to 3–5 children. 9.4% gave birth to more than 5 children.

Age at menarche and age at menopause. The mean age of menarche ($x = 14.2 \pm 1.1$) was rather high in this sample, while the mean age of natural menopause ($x = 44.8 \pm 5.1$) was extremely low compared to the samples of other nationalities. The earliest natural menopause occurred at the age of 36, and the latest – at the age of 52 years. Comparing this low average age of menopause with other Anatolian and Turkish samples, however, it turned out that the mean age of menopause seems to be generally low among Turkish or Anatolian women (see Table 1). Furthermore, an especially high percentage of women experienced natural menopause before their 40th birthday (16.7%). No statistically significant associations between age at menopause and educational level, professional status as well as the number of offspring were found. In addition, the duration of stay in Austria had no significant impact on the menopausal age.

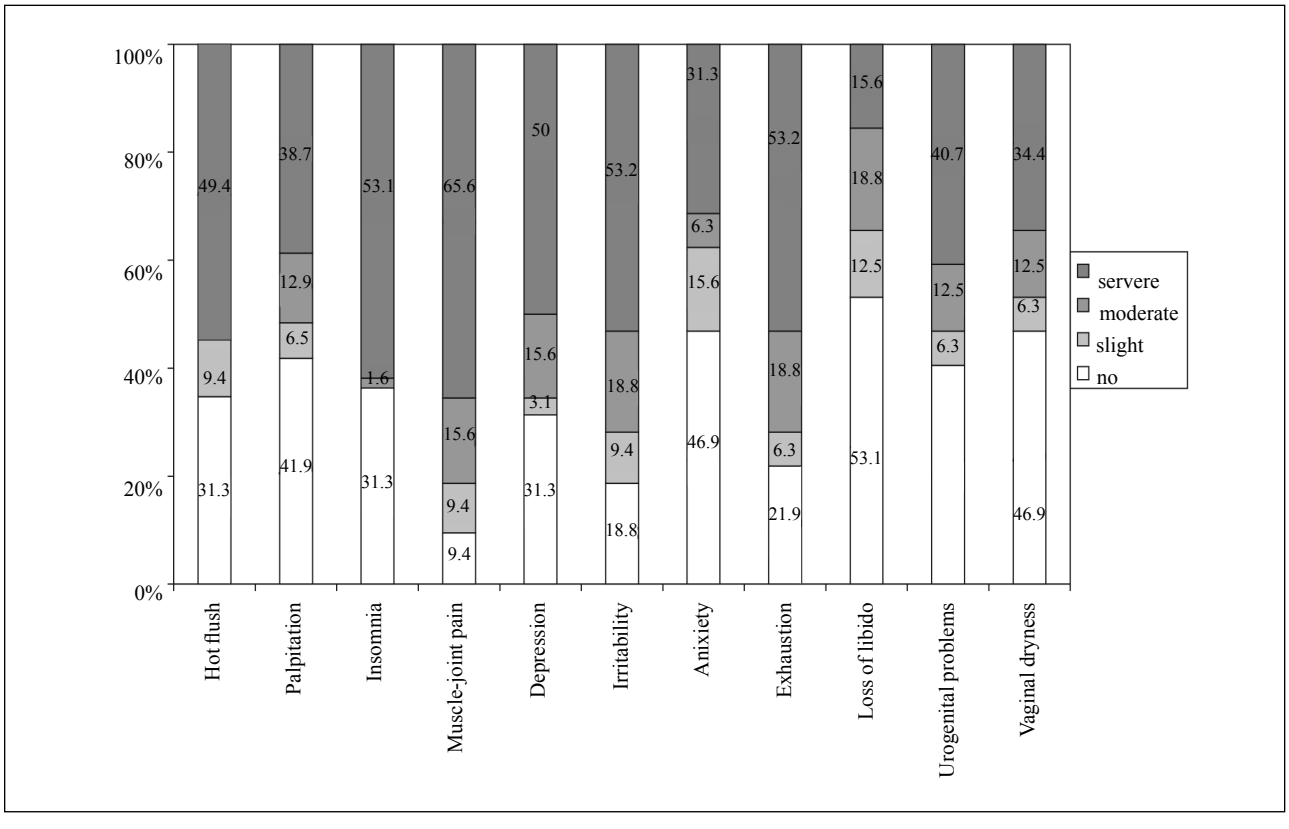

Fig. 1. Menopausal symptomatology (degree of severity)

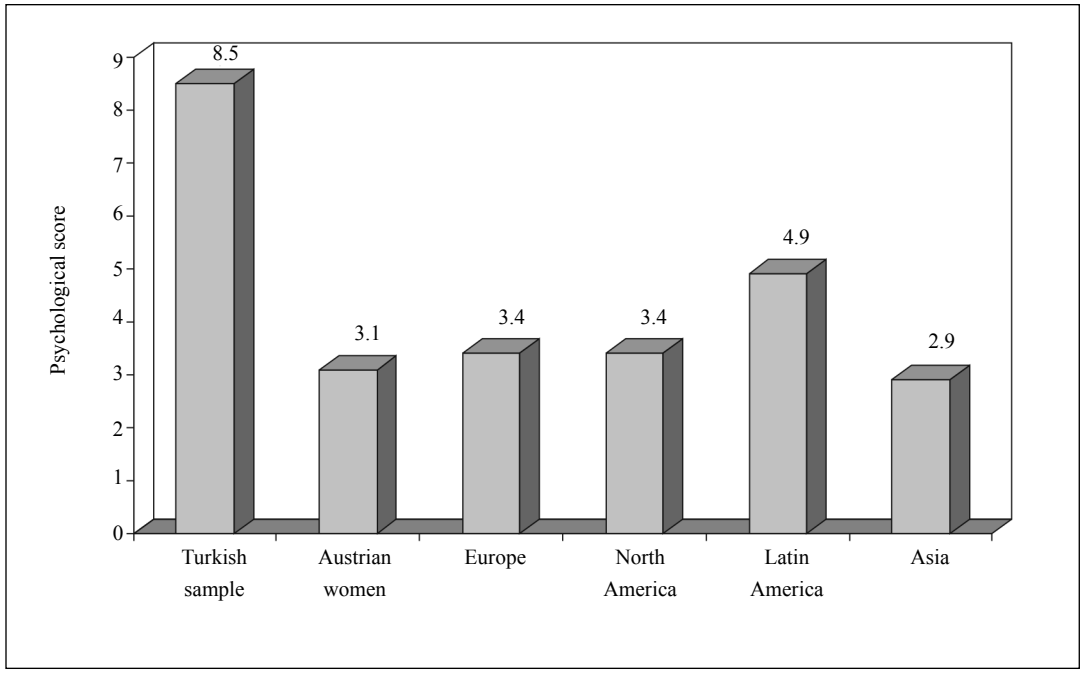

Fig. 2. Comparison of the psychological score

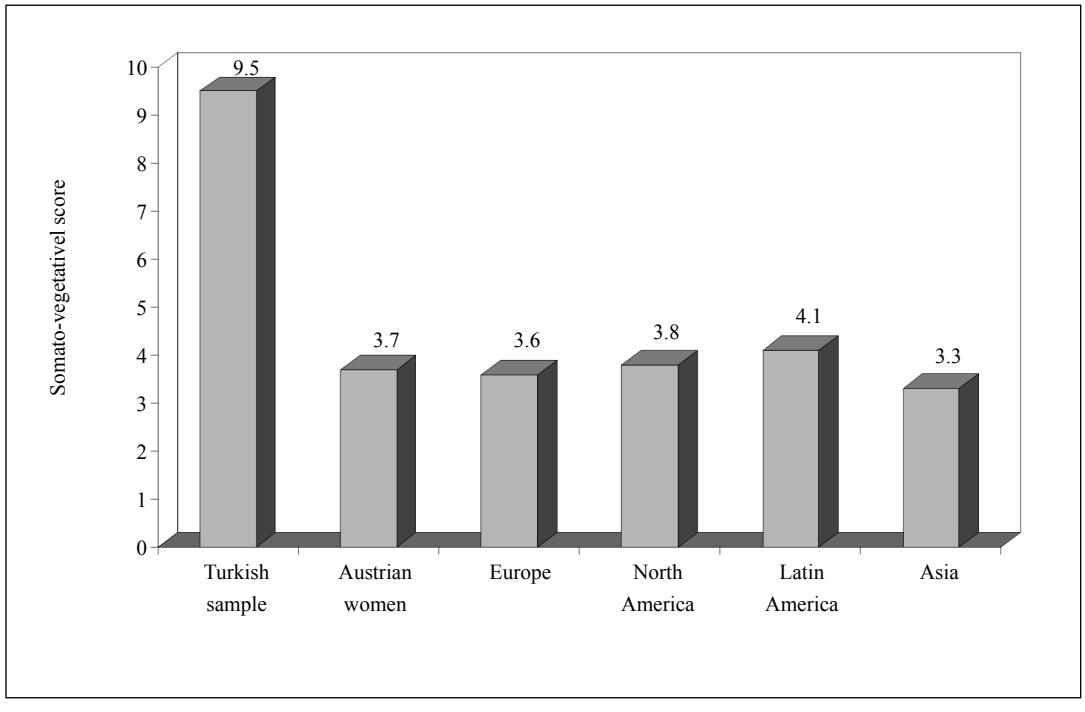

Fig. 3. Comparison of the somato-vegetative score

Climacteric symptoms. According to the Menopause Rating Scale (MRS), the majority of women suffered from severe complaints (see Fig. 1). The MRS mean values were significantly higher ($p < 0.001$) among the Turkish women in comparison to those of the population samples published by Heinemann et al. (2004) (see Figs. 2–5). Furthermore, the Turkish women of the present sample exhibited significantly higher percentages of severe complaints ($p < 0.001$) than the population's samples. This was true of the total score as well as of the psychological domain, the somato-vegetative domain and the urogenital domain (see Table 2). According to multiple regression analyses, the degree of severity of the climacteric symptoms was only significantly influenced by the number of births a woman had experienced ($p < 0.05$). With an increasing number of births the total menopausal score as well as the score of the somato-vegetative domain and the urogenital domain increased significantly

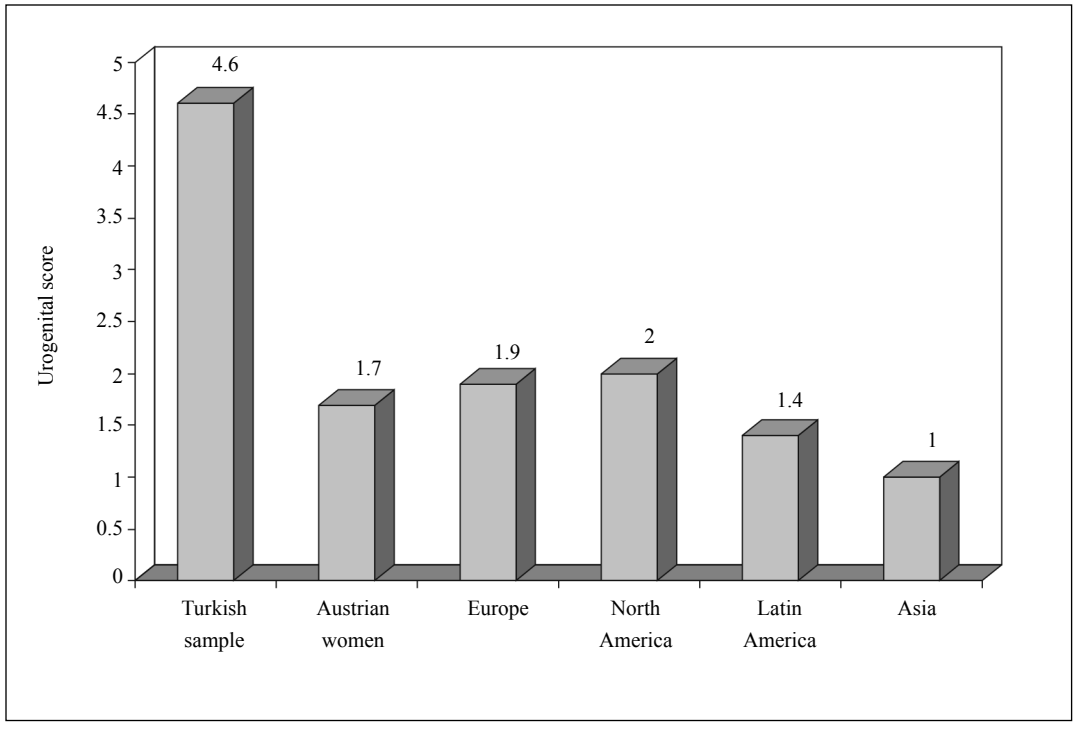

Fig. 4. Comparison of the urogenital score

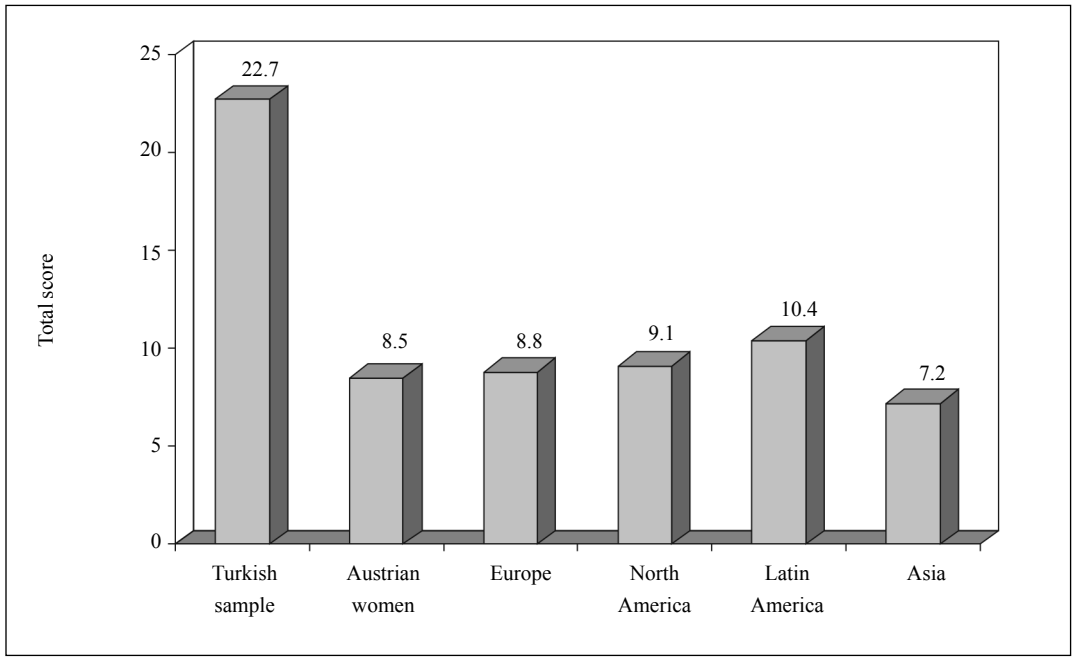

Fig. 5. Comparison of the total score

($p < 0.01$). Age, menopausal age, educational level, duration of stay in Vienna had no significant impact on the menopausal complaints.

DISCUSSION

Over the last few decades Austria has undergone a change, from a relatively homogeneous society to the so-called multicultural one (11). Although Austria cannot be considered to be a typical country of immigration such as the USA, Canada or Australia, since the sixties of the 20th century, thousands of people have migrated to Austria hoping for a better life or to find work (12). The vast majority of these migrants came from the former Yugoslavia and Turkey. In the year 2006, according to the National Census, 134 299 Turkish migrants, who did not have Austrian citizenship, lived in Austria (13). About 100 000 Turkish people had the Austrian citizenship at this time. Thus, the Austrian society is increasingly characterized by many dif-

ferent languages, religions and cultural traditions. These trends have brought health problems of different ethnic groups into focus. Migration-related factors influence the well-being, health and health-related quality of life (14–18). A lot of attention has been given to the so-called "healthy migrant theory", which incorporates two inter-related theories: that healthier people, who are more mobile and therefore are more able to migrate, are generally healthier in their new environment, too. Therefore, it was hypothesized that migrants have only minor health problems in comparison to origin as well as their host population (19). Migration however is also a stressful event which may influence health-related quality of life in a worsening manner. An especially vulnerable group includes midlife and older migrant women during menopausal transition. Although menopause is a physiological event in human female life and not a disease *per se*, menopausal transition is a critical phase in the course of a female life. Many studies have shown an increase in psychological symptoms during menopausal transition, which may increase the severity of somato-vegetative symptoms, too. Unfortunately, problems associated with menopausal transition among migrant women were not addressed yet in Austria. The present study comprising 33 Turkish immigrant women living in Vienna was, therefore, a real pilot project. It turned out, that Turkish women in Vienna reach menopause extremely early. The average age at menopause in the present sample was 44.8 years, with a range from 36 to 52 years. In comparison to their Austrian counterparts and other international samples, this mean age at menopause seems to be very low. Looking at other Turkish or Anatolian samples, however, it turned out that such an early natural menopause is not uncommon in this population. Biri et al. (20) and Discigil et al. (21) found comparable low average ages of menopause ($x = 45.8$ years and 44.38 years, respectively) among Turkish women. Carda et al. (22) described 47.8 years as the mean age at menopause for Turkish women from Ankara, an urban area. Only Aydin et al. (23) reported an average age at menopause of 50.8 years, which corresponds to the results of many international data. Furthermore, in the present study an especially high percentage of women experienced natural menopause before their 40th birthday (16.7%). This percentage of premature ovarian failure is much higher than the noticeable percentage of 8.6% of Turkish women entering natural menopause younger than 40 years reported by Vehid et al. (24). The individual age at menopause is influenced by many endogenous and exogenous factors. Within a population the average age at menopause is determined by the number of oocytes that women in general are born with, the average rate at which those oocytes and the follicles are lost through atresia and the threshold number of ovarian follicles needed to maintain menstrual cyclicity within a population (3). To explain the low average age at menopause among Turkish women, we may assume that the number of follicles at birth of these women was low. Women born to poorly nourished mothers are born with fewer oocytes in their ovaries. All the women were born in Turkey, predominantly in rural areas. It may be assumed that their mothers had to spend a lot of energy in subsistence work during their pregnancies. Perhaps due to this reason their daughters developed fewer oocytes during intrauterine phase, and the loss of oocytes through atresia was increased among them during this phase. Not only the low average age at menopause of the present sample was unexpected, this was also true of the severity of climacteric complaints. The Turkish women exhibited extremely high scores of all domains of the menopause rating scale. A strict association between migrant status and climacteric symptomatology can be assumed. This association between migrant status and the high degree of the severity of climacteric complaints may be due to the typical stress situation of Turkish immigrant women in Vienna. In Austria, immigrant status is still associated with a low socio-economic status, low integration levels, a low family income and bad housing conditions. All these factors create an enormous social stress, which affects the well-being and individual health. Many studies described the interaction between psychosocial stress and climacteric symptomatology (25, 26). Although menopause and menopausal transition are not diseases *per se*, this phase of life reduces health-related quality of life among stressed women. Stressful life events have a clear impact on reduced well-being and are important contributors of a painful menopausal transition (9, 27). Tran et al. (28) pointed out, that midlife and older immigrant women tend to have especially high levels of psychological distress, which reduced health-related quality of life dramatically. In case of the present sample, poor German language proficiency creates a barrier to the well developed health care services. In western industrialized societies the psychological distress associated with female midlife was seen as a result of the general problems of ageing. Menopause is a marked sign of female aging, and this makes menopause difficult to bear in our youth-oriented western society, but – as to be seen in the present sample – aging is also difficult for immigrant women with a non-western cultural background. Unfortunately, the situation of menopausal immigrant women in Austria has not been analyzed sufficiently up to now. Therefore, the present study represents only a pilot project which should be continued soon.

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