

Full Length Research Paper

The health-related quality of life of the health professionals working in the primary healthcare centers and its correlation with selected sociodemographic factors in Sivas, a central Anatolian city

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The aim of this study was to assess the HRQL of health professionals in primary healthcare centers in central county of Sivas, in Turkey. This study was conducted as a cross-sectional study and 248 employees working in 19 healthcare centers were taken into the sample. Two instruments were used in this study. The first instrument included questions regarding the demographic characteristics and working conditions of the health workers. The second instrument was a standardized Short Form Health Survey (SF-36) of HRQL questionnaire. In this study population, total SF-36 scales and its subscale scores were generally higher than one-half of total score of 100. While SF-36 scales were considerable changing according to sex and occupation, the effect of employment duration and age groups on these scores was not important. Males have generally more SF-36 scales than females. Health technicians and physicians have more the SF-36 scales compared to nurses and midwives. Physicians and health technicians reported better health status than nurses and midwives; women reported poorer health status than men on all eight SF-36 dimensions. Moreover, the mean scores on all SF-36 dimensions reported by the participants on this study were lower than the U.S and many European national norms.

Key words: Health professionals, health related quality of life, nursing, midwifery, health technicians, physicians.

INTRODUCTION

In recent years, along with health status, emphasis has also been placed on Health Related Quality of Life (HRQL) of the general population. Measures of HRQL can capture people's subjective evaluations of their current health status – somatic, emotional and social – that may well be related to health promoting activities and health care systems quality, equity and promotional orientation (Tountas et al., 2007). The World Health Organization has defined HRQL as "an individual's perception of his/her position in the life in the context of

the culture and value systems in which he/she lives, and in relation to his/her goals, expectations, standards and concerns" (WHOQOL Group, 1996).

Most of the research conducted so far has primarily focused on measuring the impact of disease on patients' HRQL (Chang, 2004; Wandell, 2005; Lee et al., 2006; Kristofferzon et al., 2005; Acaray et al., 2004). There are a few studies investigating HRQL of health professionals (Tountas et al., 2007; Ay et al., 2004). Most studies found assessing the health status of health professionals have used other generic health instruments (Avci et al., 2004; Cimete et al., 2003; Müller et al., 2007; Hsu et al., 2006).

The aim of this study was to assess the HRQL of health professionals (nurses, midwives, physicians and health technicians) in primary healthcare centers in the province

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of Sivas, a central Anatolian city, in Turkey.

METHOD

The design was cross-sectional and the data were collected in 2008. This study was performed with a total of 19 primary health-care centers in the province of Sivas, Turkey. Of 300 health professionals [nurses (n = 68), midwives (n = 115), health technicians (n = 46), and physicians (n = 71), 248 were accepted to participate in this study. Data were collected from 300 health workers (response rate 82.7%).

Health professionals not accepting to participate included nurses (n = 58), midwives (n = 89), health technicians (n = 41), and physicians (n = 60)]. Sivas province has a long history, continues to have traditional attitudes with its low educational level and high rate of unemployment and is one of Turkey's least developed provinces.

Questionnaires

Two instruments were used in this study. The first instrument included questions regarding the demographic characteristics and working conditions of the health professionals. The second instrument was a standardized Short Form Health Survey (SF-36) of HRQL questionnaire, which is a generic and multidimensional construct that presents a person's overall satisfaction with life. The SF-36 QOL Scale, Turkish Version, which has been tested for validity and reliability by Koçyigit et al. (1999). The SF-36 QOL Scale has been used in clinical practice and research in the determination of health policies and in the examination of general populations and was developed by Ware and Sherbourne (Ware et al., 1992) as the Short-Form Health Survey (SF-36). The SF-36 version 1.0 is a short form questionnaire with 36 items that measure eight HRQL domains: physical functioning (PF), social functioning (SF), role limitation due to physical problems (RP), role limitation due to emotional problems (RE), mental health (MH), energy and vitality (VT), bodily pain (BP), and general perception of health (GH). The answer alternatives used were yes/no, on three-grade (1¼ yes, greatly limited, 3¼ no, not at all limited), five-grade (e.g. 1¼ not at all, 5¼ very much) and six-grade scales (1¼ all the time, 6¼ none of the time). The scores for each scale are coded, summed, and transformed into a scale ranging from 0 (worst possible health) to 100 (Ware et al., 1992).

The SF-36 also provides a summary of several of the scales to two components supported by factor analysis: the physical component score (PCS) and the mental component score (MCS). The PCS includes four subscales: PF, role functioning due to limitations in role physical, bodily pain and general health. The MCS also includes four subscales: vitality, social functioning, role limitations due to emotional problems and mental health. The Cronbach's alpha of the SF-36 was 0.91 in our study. HRQL was assessed with the use of a self-administered questionnaire.

Data collection

The researcher used a face-to-face interview technique to complete the study forms. Total questionnaire completion time approximately was about 10 - 15 min.

Ethical considerations

Approval for the study was obtained from the Ministry of Health and

Table 1. Characteristics of the study population (n = 248).

Variables	n (%)
Gender	
Male	69 (27.8)
Female	179 (72.2)
Age (years)	
20–29	53 (21.4)
30–39	169 (68.1)
40 or above	26 (10.5)
Marital status	
Single	27 (10.9)
Married	221 (89.1)
Professional category	
Physician	60 (24.2)
Nurse	58 (23.4)
Midwife	89 (25.9)
Health technician	41 (16.5)
Years in profession	
1-9	101 (40.7)
10-19	129 (52.0)
20 or above	18 (7.3)
Smoking status	
Yes	101 (40.7)
No	147 (59.3)
No of chronic diseases	
Present	32 (12.9)
Absent	216 (87.1)

the primary healthcare centers. Participation was voluntary and participants could withdraw from the study at any time. Health professionals were informed that the quality of their care would not be affected by participating or not participating.

Data analysis

Data were presented as mean ± standard deviation and percentage as appropriate. Statistical analyses were performed with Statistics 7.0 Software (Statsoft, Inc., Tulsa, AR, USA). The QOL scores were compared with ANOVA followed by post-hoc Tukey test. A p-value of < 0.05 was considered significant.

RESULTS

Table 1 shows the sociodemographic features of the study population. As seen in Table 1, of 248 participants, 169 (68.1%) were in 30-39 age group, 179 (72.2%) were female, 221 (89.1%) were married, 58(23.4%) were nurses, 89 (25.9%) were midwives, 147 (59.3%) working life was 10 or more years, 101 (40.7%) smoked, and 32 (12.9%) had chronic diseases. Table 2 presents SF-36

Table 2. SF-36 Scales of the study population (n - 248).

Scales	Mean \pm SD	Min-max
PF	81.8 \pm 19.4	15.0 - 100.0
RP	80.5 \pm 28.6	0 - 100.0
BP	62.5 \pm 23.2	0 - 100.0
GH	61.0 \pm 19.7	0 - 100.0
VT	48.4 \pm 17.3	0 - 95.0
SF	75.9 \pm 22.9	12.5 - 100.0
RE	79.0 \pm 31.2	0 - 100.0
MH	60.7 \pm 17.7	8 - 100
PCS	66.9 \pm 16.0	25.4 - 95.4
MCS	65.4 \pm 16.7	25.1 - 97.1
Total score	69.0 \pm 15.9	26.5 - 95.5

PF, Physical functioning; SF, Social functioning; RP, Role physical; RE, Role emotional; MH, Mental health; VT, Vitality; BP, Bodily pain; GH, General health, PCS, Physical component score; MCS, Mental component score.

Data were presented as median (min-max).

Table 3. SF-36 Scale scores of study population according to sex.

Scales	Women (n = 179)	Men (n = 69)	Test results
Physical functioning(PF)	77.8 \pm 20.3	92.2 \pm 11.8	t = 5.557, p = 0.000
Role physical (RP)	78.1 \pm 29.7	87.0 \pm 24.9	t = 2.204, p = 0.028
Bodily pain (BP)	58.1 \pm 23.0	74.0 \pm 19.8	t = 5.045, p = 0.000
General health (GH)	59.6 \pm 21.1	64.7 \pm 14.8	t = 1.836, p = 0.068
Vitality (VT)	46.8 \pm 16.8	52.6 \pm 17.7	t = 2.392, p = 0.018
Social functioning (SF)	73.5 \pm 24.8	82.6 \pm 15.9	t = 2.839, p = 0.013
Role emotional (RE)	78.8 \pm 31.3	79.7 \pm 30.9	t = 0.212, p = 0.832
Mental health (MH)	59.8 \pm 17.8	63.1 \pm 17.6	t = 1.328, p = 0.186
Physical component score (PCS)	64.1 \pm 16.5	74.0 \pm 11.8	t = 4.605, p = 0.000
Mental component score (MCS)	64.0 \pm 17.5	68.8 \pm 14.1	t = 2.032, p = 0.043
Global Health Quality	66.7 \pm 16.6	74.6 \pm 12.2	t = 3.588, p = 0.000

Data were presented as mean \pm SD. Physical functioning; SF, Social functioning; RP, Role physical; RE, Role emotional; MH, Mental health; VT, Vitality; BP, Bodily pain; GH, General health, PCS, Physical component score; MCS, Mental component score.

Scales of the study population. For the SF-36 scales, the highest scores were for PF (81.8 \pm 19.4), while the lowest were for VT (48.4 \pm 17.3), GH (61.0 \pm 19.7) and MH (60.7 \pm 17.7). Total SF-36 scales of study population were 69.0 \pm 15.9. Table 3 shows the SF-36 scales of the study population according to sex. The PF, RP, BP, SF, VT, PCS and MCS scores of males were significantly higher than those of the females (p < 0.05); however there were no significant differences between the sexes with regard to GH, RE and MH scores (p > 0.05).

The SF-36 scales of age groups are presented in Table 4. No significant difference was found in all the SF-36 scale scores among the age groups (p > 0.05). Table 5 shows the SF-36 scales of study population according to

employment duration. All the SF-36 scales of employment duration groups were comparable (p > 0.05). Table 6 presents the SF-36 scales of the study population according to occupation. There were significant differences among the occupation with regard to PF, BP, GH, SF, MH and PCS (p < 0.05); and there were no significant differences among the occupations with regard to RP, VT, RE and MCS (p > 0.05).

The PF score of health technicians and physicians was significantly higher than those of the nurses and midwives (p < 0.05). PF, BP, and PCS scores of physicians and health technicians were significantly higher than nurse and midwives (p < 0.05). The GH score of physicians and health technicians was significantly higher than

Table 4. SF-36 Scale scores of study population according to age groups.

	Age groups			Test results
	20 - 29 (n = 53)	30-39(n = 169)	40 and over (n = 26)	
PF	82.2 ± 17.1	81.0 ± 20.5	86.5 ± 16.3	f = 0.934 p = 0.394
RP	81.1 ± 26.8	79.3 ± 30.0	87.5 ± 22.6	f = 0.938 p = 0.393
BP	60.2 ± 27.2	61.8 ± 21.9	72.3 ± 21.0	f = 2.707 p = 0.069
GH	60.9 ± 19.3	60.5 ± 20.3	64.7 ± 16.7	f = 0.504 p = 0.605
VT	49.2 ± 16.3	47.2 ± 18.0	54.6 ± 13.0	f = 2.132 p = 0.121
SF	78.5 ± 22.6	74.1 ± 23.6	82.2 ± 17.7	f = 1.809 p = 0.166
RE	83.6 ± 27.4	76.5 ± 33.0	85.9 ± 23.4	f = 1.769 p = 0.173
MH	62.8 ± 16.9	59.6 ± 18.0	63.8 ± 17.4	f = 1.105 p = 0.333
PCS	66.7 ± 16.3	66.0 ± 16.3	73.1 ± 11.9	f = 2.302 p = 0.102
MCS	67.6 ± 16.6	63.8 ± 17.1	70.8 ± 12.7	f = 2.648 p = 0.073
Total score	70.1 ± 16.3	67.6 ± 16.1	75.0 ± 11.4	f = 2.710 p = 0.069

Physical functioning; SF, Social functioning; RP, Role physical; RE, Role emotional; MH, Mental health; VT, Vitality; BP, Bodily pain; GH, General health, PCS, Physical component score; MCS, Mental component score.

Table 5. SF-36 Scale scores of study population according to working duration.

	Working duration			Test results
	1-9 (n = 101)	10-19 (n = 129)	20 years and above (n = 18)	
PF	83.5 ± 18.2	79.9 ± 20.7	86.4 ± 15.7	f = 1.434; p = 0.240
RP	81.4 ± 29.1	79.3 ± 29.3	79.3 ± 29.3	f = 0.310; p = 0.734
BP	63.7 ± 24.8	60.7 ± 22.2	68.7 ± 21.1	f = 1.178; p = 0.310
GH	63.4 ± 18.4	58.6 ± 20.9	65.4 ± 16.0	f = 2.217; p = 0.111
VT	49.4 ± 17.2	46.6 ± 17.4	56.1 ± 14.2	f = 2.444; p = 0.089
SF	77.5 ± 22.5	74.0 ± 23.4	80.8 ± 22.1	f = 1.096; p = 0.336
RE	80.5 ± 29.9	75.7 ± 33.3	94.4 ± 12.8	f = 2.919; p = 0.056
MH	62.5 ± 17.8	59.4 ± 17.9	60.2 ± 16.0	f = 1.131; p = 0.324
PCS	68.3 ± 16.1	65.0 ± 16.2	72.2 ± 11.2	f = 2.226; p = 0.110
MCS	67.0 ± 15.4	63.1 ± 17.9	72.0 ± 12.0	f = 2.851; p = 0.060
Total score	70.5 ± 15.1	66.9 ± 16.7	74.4 ± 1.3	f = 2.604; p = 0.076

Physical functioning; SF, Social functioning; RP, Role physical; RE, Role emotional; MH, Mental health; VT, Vitality; BP, Bodily pain; GH, General health, PCS, Physical component score; MCS, Mental component score.

midwives ($p < 0.05$). The SF scales of health technicians was significantly higher than those of midwives ($p < 0.05$). The MH score of physicians was significantly higher than nurses and midwives ($p < 0.05$). The total SF-36 scales of health technicians was significantly higher than nurses ($p < 0.05$).

DISCUSSION

In this study population, total SF-36 scales and its subscale scores were generally higher than one-half of total score of 100. While SF-36 scales changed considerably according to sex and occupation, the effect of employment duration and age groups on these scores

was not important. Males had generally more SF-36 scales than females. Health technicians and physicians had more of the SF-36 scales compared to nurses and midwives. For the SF-36 scales, the highest scores were for PF (81.8 ± 19.4), while the lowest were for VT (48.4 ± 17.3), GH (61.0 ± 19.7) and MH (60.7 ± 17.7). Total SF-36 scale of study population was 69.0 ± 15.9 (Table 2). These results are comparable to those of the study by Torontos et al. (2003). SF-36 scales of our study were in general lower in almost every scale than those studies conducted in Greek, Canadian, US, UK, and Swedish norms (Hopman et al., 2000; Jenkinson et al., 1999; Ware Ware et al., 1998; Sullivan et al., 1995; Ware et al., 2000).

Several studies investigating the HRQL of health pro-

Table 6. SF-36 Scale scores of study population according to occupation.

	Physicians (n = 60)	Nurses (n = 58)	Midwives (n = 89)	Health technician (n = 26)	Test results
PF	87.0 ± 17.0	77.9 ± 18.4	75.7 ± 20.7	92.9 ± 14.4	f = 10.700; p = 0.000
RP	80.0 ± 30.8	75.9 ± 28.5	79.8 ± 30.1	89.6 ± 20.1	f = 1.940; p = 0.124
BP	71.4 ± 21.1	55.3 ± 24.3	57.2 ± 22.3	71.2 ± 20.1	f = 9.082; p = 0.000
GH	68.6 ± 16.9	61.4 ± 20.0	54.3 ± 21.0	63.8 ± 15.9	f = 7.242; p = 0.000
VT	51.8 ± 17.4	44.8 ± 17.1	47.7 ± 16.0	50.1 ± 19.2	f = 1.824; p = 0.143
SF	77.2 ± 21.0	73.9 ± 23.7	74.2 ± 25.6	84.1 ± 16.0	f = 2.632; p = 0.051
RE	71.7 ± 36.7	77.6 ± 26.8	81.3 ± 32.5	86.9 ± 22.2	f = 2.237; p = 0.085
MH	68.4 ± 16.0	57.9 ± 17.2	58.0 ± 17.2	59.5 ± 19.2	f = 5.285; p = 0.002
PCS	71.8 ± 16.1	63.1 ± 16.3	62.9 ± 16.2	73.5 ± 9.8	f = 7.764; p = 0.000
MCS	67.9 ± 16.6	63.5 ± 17.0	63.1 ± 17.8	69.1 ± 13.0	f = 1.973; p = 0.119
Total score	72.2 ± 15.9	65.8 ± 16.5	66.0 ± 16.6	90.1 ± 9.8	f = 4.770; p = 0.003

Physical functioning; SF, Social functioning; RP, Role physical; RE, Role emotional; MH, Mental health; VT, Vitality; BP, Bodily pain; GH, General health; PCS, Physical component score; MCS, Mental component score.

professionals demonstrated that males have more SF-36 scales compared to females (Tountas et al., 2003; Tountas et al., 2007). In other studies using scales such as World Health Organisation Quality of Life Assessment (WHOQOL- BRIEF) and Work-Related Quality of Life scales, HRQL of males was found to be higher in males than females (Kaya et al., 2004; The WHOQOL Group, 1998; Saatli et al., 2003; Asada et al., 2004; Lee et al., 2006; Uğur et al., 2008). This difference to some extent seems to reflect the disadvantageous position of woman in a predominantly male societal structure in working environments in several countries. Perhaps this is even more important in the case of Turkey that is a developing country where females' social position is traditionally worse than that of males.

However, it is possible that the great magnitude of these sex differences in the HRQL observed in this study was not only a reflection of females' disadvantageous position in society but also a result of professional differences between males who were mostly health technicians and physicians and females who were mostly nurses and midwives. These diversities could stem from differences in the working environment, as well as from cultural, hierarchical and socioeconomic inequalities among health professionals. Generally, working conditions for nursing and midwifery staff are less stressful and demanding compared to medical staff (Estryn et al., 1990; Tan, 1991). When the mean scores in the domains of SF-36 in nurses, including RP, SF, and RE; of health technicians including PF, RP, SF, RE and physicians, including SF, were examined, it was noticed that the results obtained in the present study were slightly lower than those obtained by Tountas et al. (2003). Cimete et al. (2003) conducted a study to determine whether there is a relation between job satisfaction and quality of life

(QOL) of 501 nurses by means of WHOQOL BRIEF. They demonstrated a positive correlation between job satisfaction and QOL, they also found that QOL scores of nurses showed a significant difference according to their age, economic level, marital status, duration of working life and position at work.

The scores for all eight domains of SF-36 by sex, age, professional category and workplace have been reported in a previous publication by Tountas et al. (2003). According to these data, most participants scored towards the positive end of almost all SF-36 scales, a finding indicative of the better state of health for the majority of the study participants. Furthermore and according to these previous findings (Tountas et al., 2003), one can suggest the presence of a positive association between the SF-36 scores and the presence of favourable health behaviours, particularly in the employees of certain health professionals- technical and auxiliary personnel (Tountas et al., 2007).

Conclusion

Physicians and health technicians reported better health status than nurses and midwives; women reported poorer health status than men on all eight SF-36 dimensions. Moreover, the mean scores on all SF-36 dimensions reported by the participants on this study were lower than the U.S and many European national norms. In summary, there was no study investigating the HRQL of health professionals in central Anatolia. The HRQL of health professionals in our region is suboptimal and requires improvements in the short- and long-term. While performing health related jobs in primary care center settings, HRQL of health professionals is an important factor

for the management of these centers and increasing the quality of health services. Further studies in large settings for different areas of our country are required to determine the HRQL of nurses, midwives, health technicians and physicians to plan future directions of health related developments.

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