Original Research

Study and Comparison Quality of Life of Dentists of Urmia Before and After Covid-19

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Abstract

Background: The aim of this study was to evaluate and compare the quality of life of dentists in Urmia before and after the Corona pandemic in 2021.

Methods: In this cross-sectional study, a translated questionnaire of quality of life of the World Health Organization (QoLHO) was distributed between general dentists in Urmia between July to August 2021. The participants' respondence was calculated and compared with their demographic information (gender, graduation degree) and analyzed using SPSS 16.0 software

Results: 144 responders (79 males and 116 married, 108 general dentists with men age 34.14 ± 7.02) were participated. There was a significance correlation between dentists' quality of life in the aspects of physical health ($p = 0.009$) and social communication ($p = 0.050$). There was no significance correlation between dentists' quality of life according to their Age, Marital Status and specialty ($p > 0.05$). Also there was no significance difference between Dentists' quality of life before and after covid-19 pandemics ($p > 0.05$)

Conclusion: The study findings suggested that covid-19 pandemics has no significance effect of Dentists' quality of life, also there was no difference between general dentists and specialists quality of life.

Keywords: Dentists, Quality of Life, Covid-19, Quality of life.

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Introduction

According to World health organization (WHO) the concept of "health" is benefiting from complete physical, mental and social well-being without any disease and infirmity (1). According to WHO, quality of life is defined as people's perception of their role in life in terms of culture, the value system in which they live is their goals, expectations, standards and priorities (1). Quality of life is an important issue that is used as individual behavior against the consequences of mental, physical and social health. Also, considering that job satisfaction among physicians is decreasing, this issue has an impact on their occupational quality (2). Dental Practice acquires is a highly forceful career with extreme mental and physical severities, dentists are among high-risk professions in terms of occupational burnout (3). So, quality of life and occupational satisfaction is highly crucial between dentists is vulnerable. There are many factors which affects dentists' quality of life and occupational satisfaction which were categorized as physical and mental factors. Repetitive nature of dental treatments. Non-cooperative patients, unsatisfied personnel and dental assistants, long duration of dental treatments, all make dentists occupational career stressful (4-7). Occupational stress has wide variety of harmful consequences including cardiovascular disease, mental disorders and neuromuscular disorders (8,9), which altogether lowers dentists' quality of life (10, 11). Most of the mentioned consequences are highly-cost and lowers productivity potential of dental personnel (12). Studies suggested that more than one-third of dentists are obese, and more than half of them are irrigative and depressive and have sleep disorders (13). COVID-19 pandemics caused by severe respiratory acute syndrome Coronavirus-2 is one of the greatest covid-19 pandemics in 20th century with high fatal rate (14, 15). Dental practice is highly affected during pandemics, since quarantine limitations, robed dentists of their ordinary career (16, 17). Since dentists' quality of life is highly affected by their career expectations (18). Different studies suggested that covid-19 pandemics affected dentists quality of life and service in different manners and spectrums (19, 20). It seems that dentists' quality of life and occupational satisfaction can be deemed during the pandemics, so the aim of the present study is to investigate the Iranian dentists' quality of life and occupational satisfaction during covid-19 pandemics.

Methods

The study protocol was reviewed and approved by Urmia University of Medical science, ethical board (code: IR.UMSU. 1400.033). In the present cross-sectional retrospective study, one-hundred and fifty dentists and dental specialists resident in Urmia city, Iran during 1st June to 31th August were participated. The sample size was calculated according to previous studies (17) and using 95% confidence interval and 90% statistical power. Inclusion criteria were dental practitioners in Urmia which have reviewed and signed participation consent form.

Pre-administrated Persian-translated form of modified Word Health Organization Quality of Life (WHO QoL) questionnaire, developed in 1996 (18) were used as a survey tool. The questionnaire was consisted of 26-items and four different parts including physical health (7 items), mental health (6 items), social communication health (3 items) and environmental health (10 items). Each item has 5-choices ranging from 1-5 values. Validity and reliability of questionnaire is investigated and approved in similar studies (19). Since there was a social-quarantine during study, the questionnaire was online distributed to the participants via www.porsline.ir online questionnaire center. The questionnaire online link was distributed to dentists via social networks like WhatsApp. The participants were requested to firstly enter their demographic information including gender, age, specialty and work experience, secondly 26-items questionnaire was awarded to the responders. Each questionnaire subgroup ranging from 0-24 values. After finishing respondence, data was saved in the

online center database and transformed to the user online account. The data from questionnaire was compared with the data concluded from similar study by Razeghinezhad et al (20) on 2019, before covid-19 pandemics with the same questionnaire. Questionnaire data was recorded in IBM SPSS 16.0 (IBM, Chicago, USA). The study results were recorded in mean and standard deviation. Intragroup comparison was conducted using One-Way ANOVA and tukey post-hoc. Student t-test was used to pairwise comparison of each field according to gender and specialty. Mann U Whitney test was used to compare responders' quality of life before and after covid-19 pandemics. Statistical significance was mentioned as $p < 0.05$.

Results

144 responders completed the questionnaire (96% responding rate). 79 (54.9%) were males and 65 ones (45.1%) were females. Mean Age of participants was 34.14 ± 7.02 years. 102 responders (70.2%) were general dentists and 42 ones (29.8%) were dental specialists. Occupational experience among responders ranging from 1 to 43 years with mean of 14.06 ± 11.03 years.

One Way ANOVA test was used for intragroup comparison of dentist's quality of life in four-different fields according to responders; age, the results suggested that there was no significant difference in responders' quality of life in all fields of physical health (F =0.632, P=0.456)., mental health (F=0.678, P=0.93), social communication (F=0.767, P=0.831) and environmental health (F = 0.873, P=0.673). According to gender, t-test analysis suggested that females have significantly more physical (P= 0.009) and social communication (P=0.050) health in comparison to men, in two other fields there was no significant difference in mental (P = 0.495) and environmental (P = 0.149) health. Also, there was no significant difference in dentists' quality of life according to their specialty and work experience (P > 0.05). More detals are illustrated on Table 1. Intergroup Analysis of responded questionnaires before and after covid-19 pandemics using Mann Whitney test suggested that there was no significant difference between two questionnaires in terms of physical health (P= 0.104), mental health (P=0.83), social communication health (p = 0.703), environmental health (P=0.186). More details are illustrated in Table 2.

Discussion

In the present study, the quality of life and occupational satisfaction in dentists was compared before and after covid-19 pandemics using WHO QoL questionnaire which was a valeted and reliable questionnaire (19).

There was no significance difference between participants in terms of Age, work experience and specialty. In a study conducted by Alrayesh et al (23) suggested that dentists in Saudi Arabia with more than 10 years' work experience were more sensitive to quality of life in terms of physical and environmental health in comparison to dentists with less than 1 year work experience. The same study reported that dental specialists were more sensitive to change in quality of life in all four fields in comparison with general dentists and dental consultants Another study by Texiera et al (24) on dental students suggested that students younger than 20 years old were more sensitive to change in quality of life in comparison to students older than 20 years old. The difference in studies could be due to difference in ethnical, social and economical factors in different societies.

The results of the present study, suggested that women where more sensitive to covid-19 pandemics in terms of physical and social health which was in consistency with the findings of Texeira et al multi-center survey among dental students (24) , A similar study suggested that women are more prone to emotional distress resulting from covid-19 pandemics (21). The study conducted by Alrayes et al. (23) on Saudi Arabia Dentists with the same tool, reported that there was no difference in male and female dentists' quality of life in terms of all fields, which was not in consistency with our finding, it

suggests that women are more sensitive to covid-19 pandemics in Iran in comparison to other parts of the world. The results of the present study suggested that dentists' quality of life after covid-19 pandemics according to WHO QoL questionnaire was lower than the same survey before pandemics, although the difference was not statistically significance (20), the results suggested that the covid-19 pandemics has a slightly negative effect on dentists' quality of life in Iran. The highest difference was correlated to physical health field, while the least difference was reported in mental health field. The study conducted by Ahmad et al (22), on Iranian dentists suggested that most of the participants faced physical distress while using personal-protective equipment's during covid-19 pandemics. The study had some limitations, firstly the study was single-center in a single city, so it is not probable to locate the role of environmental and ethnical factors in this dilemma. Secondly the study was not prospective and the comparison between two time points was conducted in two separate studies and non-controlled conditions. Also, other factors like monthly income, marital status, religion, service providing place can be effective in the mentioned correlations, which can be addressed in further studies.

Conclusion

The findings of the present study suggested that, covid-19 pandemics does not affect quality of life between dentists in Iran. Covid-19 pandemics through different factors affected women's physical and social health. Work experience and Age does not affect dentists' quality of life in any dimension. The authors suggested further studies using further variables like children, income, religion, health insurance etc. on dentists' quality of life.

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Authors Contributions:

AG, MHR conceptualized the study objectives and design. AG, MHR are infectious disease specialists who contributed to data collection from patients along with AG, MHR drafted the study design protocols to be submitted to research centers. Data were was analyzed by UZ and RF. Manuscript was drafted by AG, MHR. All authors contributed in revisions.

Ethical Consideration:

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Tables:

Table 1. Comparing the four different fields of quality of life according to demographic information

Parameter	Fields	Parameters	Mean (STD)	Statistical Parameters
Specialty[1]	Physical Health	General	24.9	T = 1.041
		Special	25.8	P = 0.3
	Mental Health	General	20.4	T = 0.07
		Special	20.5	P = 0.944
	Social Communication Health	General	10.3	T = 0.78
		Special	9.9	P = 0.437
	Environmental Health	General	25.3	P = 0.373
		Special	25.7	P = 0.71
Gender[1]	Physical Health	Male	24.3	T = 3.614
		Female	26.3	P = 0.009
	Mental Health	Male	20.1	T = 0.684
		Female	20.7	P = 0.495
	Social Communication Health	Male	9.8	T = 1.974
		Female	10.6	P = 0.050
	Environmental Health	Male	24.8	T = 1.636
		Female	26.2	P = 0.104
Work Experience[2]	Physical Health	F = 1.412 p = 0.104		
	Mental Health	F = 0.963, p = 0.528		
	Social Communication Health	F = 1.075, p = 0.381		
	Environmental Health	F = 0.765, p = 0.794		

1. One Way ANOVA, 2. Paired T-test

Table 2. Intergroup Analysis of Dentists' quality of life in terms of four different fields

Field	Before Pandemics[1]	After Pandemics [1]	Z	P-value
Physical Health	153.43	137.43	-1.625	0.144
Mental Health	147.45	144.4	-0.201	0.83
Social Communication Health	147.35	143.63	-0.381	0.703
Environmental Health	151.96	138.09	-1.322	0.186

2. Mean Ranks , *Mann U Whitney Test