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# The relation between the quality of life and restless legs syndrome in patientsundergoinghemodialysisis dialysis centers in ChaharMahal and Bakhtiari, 2011

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**ABSTRACT**

**Aims:** The chronic renal failure and the subsequent hemodialysis and its consequent problems such as restless legs syndrome affect the individual's quality of life through the changes they cause in his life style and health status. The present study was conducted to investigate the association between the quality of life and restless legs syndrome in hemodialysis patients.

**Materials and Methods**: In this descriptive –analytical study, 171patients who were undergoing to hemodialysis at hospitals of ChaharMahal and Bakhtiariprovenanceselected via census sampling. The subjectsdivided into two groups; one suffering from the restless legs syndrome and the other without syndrome. Data was collected using WHO-QOL BREF quality of life questionnaire andrestless legs syndromequestionnaire, then it was analyzed by the software SPSS 15 and independent statistical t-test.

**Findings**: The findings revealed that 98(57.3%) out of 171 hemodialysispatients, who were studied, suffered from restless legs syndrome and 73(%42.7) subjects were without syndrome. The average age in the group suffering the syndrome was 59.27± 16.86 and in the group without syndrome was 55.20±17.95.However thedifferencebetween the average age in both groups was not statistically significant (p= 0.131).The average quality of life in the group suffering the syndrome was 32.82±8.53and in the group without the syndrome was 39± 14.57. This difference was statistically significant ($p<0.05$).

**Conclusion**: regarding the result of the study, the average quality of life in hemodialysispatients is low. Patients suffering from restless legs syndrome also have lower quality of life. Therefore it is recommended that the quality of life of these patients be improved through taking appropriate measures and presenting requisite interferences.

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## 1. Introduction

Nowadays since acute diseases have epidemiologically turned into chronic ones, the

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quality of life of the individual is under the influence of his disease and treatment interferences. Quality of life is a multi-dimensional issue and is affected by time, place and social and personal values. It also surpasses health status, clinical signs or personal abilities.These signs reflect health status but one should take this into consideration that health is just one aspect of quality of life and the influential factors in quality of life include the individual's sense of content about himself, his familial status , social and economical resources and the most important of all, his mental and emotional status; thus improving thequality of life is considered as one of the aims in treating chronic diseases[2,3].

The chronic renal failure is one of these diseaseswhose spread rate in the world is 242 out ofone million and %8 is added to this rate annually. Based on the existing statistics in Iran, an estimation of 1200 to 1600 individuals are afflicted with this disease annually [4]. The incremental spread of this disease and patient's conduct of hemodialysis brings about problems such as job discriminations, job forfeiting due to frequent hemodialysis, problems in finding proportional job and pause in the course of their jobs, which affects these patients' economical situation[5]. These patients not only encounter various physiological changes but also have to face a lot of mental tension in a way that the majority of themcannot become adapted with the problems and tensions and thus evince different behavioral anomalies such as anxiety, depression, seclusion, negation of the disease, delirium, hallucination. This condition will eventually lead to the decline in quality of life. In other cases burning sensations in parts of the body, restless legs syndrome,prolapsed of the legs and even full paralysis are among important complications in nervous system[6]. One of the most complication of hemodialysis is restless leg syndrome. It is a neurological disorder of movement which is usually accompanying with sleep disturbances. The patients who suffer from restless legs syndrome like vigorously to move their leg among the sleep period. They explain this status as an uncomfortable condition which may be worth during immobility periods.

The spread of restless legs syndrome into the whole population is about two to fifteen percent[7]. Theconducted studies showed that in patients suffering from chronic renal failure along with restless legs syndrome, the number of the body moves, the times they wake up from sleep and the quality of sleep are worse than normal people. These mentioned cases affect thesufferer'srestless legs syndrome[8]. Patients in need of hemodialysis have to face thedifficulties resulting from hemodialysis such as the decrease in efficiency and ability to do their affairs, weakness, fatigue, lack of motion, lack of self-confidence on the one hand and on the other hand they encounter sleep problems caused by restless legs syndrome, anxiety, depression, giddiness and sleepiness during the day. These situations not only make their own life difficult and complicated but also that of their families[9]. A few months after the outbreak of the disease when the complications show up and the treatment is started, patients feel that their quality of life has decreased dramatically[10]. While the study by Landreneau et al, 2010 revealed that the quality of life of hemodialysis patients is low interms of physical and functional aspects[11]. Regarding the changes that may appear in different aspects of hemodialysis patients' life and also considering the contradictory results of thepatients' quality of life attained in different countries, gaining knowledge about these patients' daily challenges and about how these affect their quality of life can have a prominent role in treatment and healthcare. Therefore the present research was planned to investigate the association between the quality of life with restless legs syndrome in hemodialysis patients.

## 2. Methods

This is a descriptive- analytical study which was conducted on 171 hemodialysis patients hospitalized in dialysis wards in 1390 in ChaharMahal and Bakhtiari. The requirements



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for entering this study were to have medical records in hemodialysis wards, to be in the list of weekly hemodialysis, to have full consciousness and tendency to continue the cooperation. They were assured about the absolute secrecy of the collected data. And by presenting thorough and sufficient explanations to the wards under the study about the aims and procedures of the research it was attempted to observe the ethics of research. Data collection instruments were international questionnaire of restless legs syndrome andWorldHealthOrganization quality of life questionnaire (WHO-QOL BREF) which were completed by means of the interview done by the researcher. At first, by using the international questionnaire of restless legs syndrome the extent to which patients suffered the syndrome was investigated and at the next level to reject distinctive diagnosis, a nephrologists did the nervous and motor examination to make sure that there is no nervous disorder and that patients suffer restless legs syndrome. Then the patients were divided into two groups one of which suffered restless legs syndrome and the other without the syndrome. Restless legs syndrome questionnaire included four questions in four-pointLikert scale (never, sometimes, often, and always). Each response is assigned a score ranging from zero to three and the acquired points were from zero to twelve. If the cases had scored less than four, they would have categorized as a group without syndrome and if they had scored four to eight, they would have categorized as the group with slight syndrome and the scores from eight to twelve indicated acute restless legs syndrome. WorldHealth Organization quality of lifequestionnaires included 26 questions in five- pointLikert scale. The score zero represented negative understanding and the score four denoted positive and good understanding.After converting the scores to percentage, the lowest score in this part was zero and the highest one was 100. In terms of the validity and constancy of data collection instruments, the questionnaire of restless legs syndrome and the WHOquality of life questionnaire are standard questionnaires whose scientific validity has been assessed and they have also been used in several researches in Iran[12,13]. After extracting the data, they were analyzed by the methods of descriptive-analytical statistics by using software SPSS15. Also the dependent t-test was used to compare the average score of quality of life and age in both groups with and without restless legs syndrome.

## 3. Results

The results revealed that 73 (%42.7) of171 hemodialysis patients under study were without syndrome and 98 (%57.3) ofthemwere suffering restless legs syndrome. Out of 98 sufferers, 64 (%65.3) had slight syndrome and 34 (% 34.7) suffered acute syndrome. Of this population 95 (%55.6) individuals were men and 76 (44.4) were women (table 1). The age of the cases under study ranged from 12 to 92. The average age in the suffering group was /۵۹/۲۷±۱۶86 and in the group without the syndrome was۵۵/۲۰±۱۷/۹۵; however the difference between the average age of both groups was not statistically significant (p=0.131). The average score of the quality of life in the group with syndrome was ۳۲/۸۲±۸/۵۳ and in the group without that was ۳۹/۰۰±۱۴/۵۷ . This difference was statistically significant (p <0.05)( table 2).

## 4. Discussion

While investigating the resources, we couldn't find any similar study comparing the equality of life of the hemodialysis patients suffering restless legs syndrome and that of individuals without syndrome.Therefore just the studies conducted on the comparison of hemodialysis patients' quality of lifewiththat of healthy individuals are considered here. In this research a majority of the cases were men. In the study conducted by Tenka et al also men comprised most of the hemodialysis cases. A large population of the hemodialysis patients suffer restless legs syndrome and the finding is similar to the result of the other researches on this



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Table 1.Frequency distribution of hemodialysis patients with and without restless legs syndrome in terms of sex

| total | female | male | group |
|---|---|---|---|
| | Number of the individuals)(percent) | Number of the individuals)(percent) | |
| ۷۳ | (%۱۹/۳) ۳۳ | (%۲۳/۴) ۴۰ | Without restless legs syndrome |
| ۶۴ | (%۱۵/۲) ۲۶ | (%۲۲/۲۲) ۳۸ | Slight restless legs syndrome |
| ۳۴ | (%۹/۹۴)۱۷ | (%۹/۹۴) ۱۷ | Acute restless legs syndrome |
| ۱۷۱ | (%۴۴/۴) ۷۶ | (%۵۵/۶) ۹۵ | total |

Table 2.The comparison of quality of life and age in both groups

| Standard deviation ± average age | Standard deviation ± average score of quality of life | group |
|---|---|---|
| ۵۵/۲۰±۱۷/۹۵ | ۳۹/۰۰±۱۴/۵۷ | Without syndrome |
| ۵۹/۲۷±۱۶/۸۶ | ۳۲/۸۲±۸/۵۳ | With syndrome |
| P=۰/۱۳۱ | p<۰/۰۵ | Result of the independent t test |

issue. In the study conducted byHamdan in Riyadh,Saudi Arabia (2009), the results revealed that most of the hemodialysis patients (approximately %80) have restless legs syndrome[12,14].

In two groups with and without syndrome the average score of quality of life was somehow low. The quality of life of patients with restless legs syndrome was lower than that of the other group and this difference was statistically significant. The result of the Zhang's study under the subject of the investigation of dialysis patient's quality of life agrees with our study in a way that also in this study the quality of lifescores of the patients were low in emotional functionality and general health. In the study by ZamanZadeh et al [15] too, roughly half of the patients had undesirable quality of life[16]. Fukuhara's study equally displayed that the quality of life of hemodialysis patients was lower than that of healthypeople[17].

Morsch's research also manifested similar results to ours[18]. Tagay et al in his study demonstrated that the quality of life in patients who had reached the final level of renal failure and used to undergodialysis before, had considerably decreased compared to that of normal people[19]. Thus to justify the low level of quality of life in these patients one can refer to the prolongation of hemodialysis up to several hours, the limitation of the individual, the occurrence of complications such as crumpled feet, lassitude and nausea. Along with other problems, unemployment is one of the influential factors in these patients' economical conditions which affect their quality of life. Also their depending on the dialysis unit, witnessing other patients' diseases and ailments concomitantwith renal failure, commuting difficulties, the stress prevailing in the ward, inadequate socialand familial supports, inefficient self-care training can be considered as reasons that ail the patients' quality of life.

The study by Alarabi showed different results compared to those of ours and had evaluated the quality of life of the most patients as desirable[5].As a justification, as it is also mentioned about Rambod'sstudy, it should be stated that various factors can be influential in assessing quality of life. And those who are adaptable or those who benefit from social and familial support would cope faster with their



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disease and the disease would affect their quality of life less[20].

Generally speaking, incurability of this disease as well as virulent complications of dialysis bring the patient in confrontation with a stressful situation and causes a lot of problems for him, such as mood disorders which are subsidiary to or concomitant with the underlyingdiseases such as epilepsy, anemia, metabolic disorders and such.

Impairing the job quality, reducing physical activities, causing conjugal problems resulting from the prolongation of the disease, enduring lack of familial support and economical problems are among other factors which can result in disorders in dialysis patients' quality of life.

## 5. Conclusion

Considering the changes lying in the quality of life of the hemodialysis patients suffering from restless legs syndrome, it's required of the nurses and the patients' families to pay attention to other aspects besides the physiological ones and put an effort to improve these patients' quality of life by presenting proportional and requisite interferences.

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