

QUALITY OF LIFE AFTER KIDNEY TRANSPLANTATION: INTEGRATIVE REVIEW

Qualidade de vida após o transplante renal: revisão integrativa

Alcoholismo y envejecimiento en las investigaciones en salud: un perfil bibliométrico

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ABSTRACT

Objective: Tevaluate scientific publications about alcoholism and aging. **Methods:** It included analysis of items available in the database of the LILACS, EBSCOT and MEDLINE, in the period from 2010 to 2016. **Results:** The findings of this review show increasing bibliometric search on the subject in several countries, in recent years, enhancing the importance of the contributions on the subject in terms of public health, as well as researchers working in different areas of knowledge. **Conclusion:** It is important that health professionals and the elderly debate about alcohol consumption as a component of chronic disease management and that the health care network ensures quick intervention or referrals. Despite the relevance, studies on the subject are still scarce in the national research scenario, and more scientific production is needed.

Descriptors: Primary health care, Rural health, Men's health, Health management.

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RESUMO

Objetivo: Analisar como a literatura apresenta a qualidade de vida em paciente transplantado renal. **Métodos:** estudo de revisão nas bases: MEDLINE, LILACS e SCIELO. Utilizou-se os descritores *kidney transplantation e quality of life*, combinando-se com o operador booleano *and*. Após consideração dos critérios, foram analisados integralmente 15 artigos. **Resultados:** as publicações evidenciaram que o transplante contribui para melhoria da qualidade de vida do paciente, ainda assim, se comparado à população geral essa qualidade é inferior. Fatores como: presença de comorbidades, tempo de transplante, nível de escolaridade e aspectos psicológicos influenciam a visão que o paciente possui da sua qualidade de vida. **Conclusão:** a qualidade de vida após o transplante é envolta de múltiplos aspectos e particularidades. A constatação dos benefícios do transplante para o doente renal, não isenta a possibilidade da existência de dimensões negativas as quais podem comprometer a percepção da qualidade de vida.

Descritores: Transplante de rim, Qualidade de vida, Nefropatias, Falência renal crônica, Adulto.

RESUMEN

Objetivo: Analizar cómo la literatura presenta la calidad de vida en pacientes con trasplante renal. **Métodos:** estudio de revisión base: MEDLINE, LILACS y SCIELO. Se utilizaron los descriptores trasplante de riñón y calidad de vida, combinados con el operador booleano *and*. Después de considerar los criterios, 15 artículos fueron completamente analizados. **Resultados:** las publicaciones mostraron que el trasplante contribuye a la mejora de la calidad de vida del paciente, aunque, en comparación con la población general, esta calidad es menor. Factores como: presencia de comorbilidades, tiempo de trasplante, nivel educativo y aspectos psicológicos influyen en la visión del paciente sobre su calidad de vida. **Conclusión:** la calidad de vida después del trasplante está rodeada de múltiples aspectos y particularidades. Encontrar los beneficios del trasplante para el paciente renal no exime la posibilidad de dimensiones negativas que pueden comprometer la percepción de la calidad de vida.

Descriptores: Trasplante de riñón, Calidad de vida, Nefropatías, Fallo renal crónico, Adulto.

INTRODUCTION

Chronic non-communicable diseases are responsible for about 60% of the causes of death worldwide, committing about 35 million people annually.¹ Among the most frequent and limiting is chronic kidney disease, which consists of the progressive and irreversible loss of renal function.¹ The final phase of this pathology leads the patient to need some type of renal replacement therapy.²

Among the available substitute therapies, kidney transplantation has been pointed out as the most adequate therapeutic option for patients who meet the criteria established by health teams. When successful, it increases the longevity and reduces the morbidity of chronic renal patients compared to dialysis treatments.³

Kidney transplantation is a treatment that aims to promote a better Quality of Life (QL) to patients. The definitions for the term QL are distinct and involve

objective and subjective aspects. In this study, we chose to consider the definition consecrated by the World Health Organization (WHO), which defines QL as: the perception that the individual has about his/her position in life, his/her context, his/her culture and value system, also involves, the adjustment with his/her objectives, expectations and desires.⁴

As mentioned, the concept of QL is broad and multidimensional in the health sciences, besides the consideration of aspects related to psychological conditions, well-being, social interactions, socioeconomic and spiritual factors; it is closely related to the presence or absence of illnesses, diseases and impacts of health treatments.⁵⁻⁶

The recognition of QL as a primordial factor for people's health has been raising scientific and professional interest, promoting research related to the subject.⁷ Nevertheless, with regard to kidney transplantation there is a limitation in research that seeks to verify the impact of this therapy on the QL of transplanted individuals, especially those who consider the individual's own perception of their QL.⁸

Assessing the QL of kidney transplanted patients is essential to estimate the effective benefit of this therapy in their lives.³ Considering the magnitude of kidney transplant outcomes for those in need of replacement therapy, this article aims to analyze how the literature presents the quality of life in kidney transplanted patients. To meet the proposed objective, the following guiding question was formulated for the study: how is the QL of the kidney transplanted patient evidenced in scientific production?

METHODS

Descriptive study, based on an integrative literature review. The purpose of this method is to gather and synthesize studies, empirical or theoretical, in order to provide, after careful analysis, a comprehensive understanding of a given subject in order to produce conclusions and point out gaps.⁹

The construction of this review respected the following steps: definition of the research guiding question; selection of databases; delimitation of the inclusion and exclusion criteria of the articles; use of an instrument for data collection, elaborated by the researchers, being based on the one validated by Ursi;¹⁰ evaluation of the level of evidence of the studies, as suggested by the scientific literature.¹¹

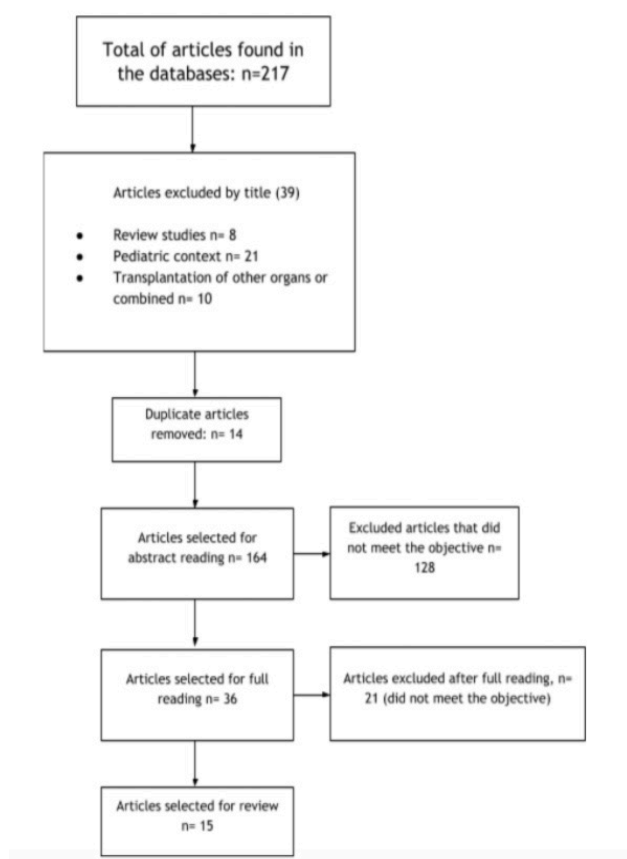
To answer the guiding question of the present study, we used as a search strategy the crossing of the following descriptors in health sciences: kidney transplantation, quality of life combining the terms with the standard Boolean operator *and*. The search for articles was carried out independently by two researchers in the databases: a) PubMed/MEDLINE, which has content from biomedical sciences and related sciences; b) LILACS, accessed through the Virtual Health Library; c) SciELO, a portal that displays national scientific journals in health sciences and other

areas of knowledge.

It was stipulated that the inclusion criteria would be: articles available in full and with free access in electronic support; studies of national and international literature available in English and/or Portuguese; published in the time clipping from 2011 to 2015; that correspond to the patient's QL theme after kidney transplantation and articles aimed at adult and/or elderly audiences.

Regarding the exclusion criteria, we used: research that diverged from the proposed objective, studies that referred exclusively to renal replacement therapies that did not include kidney transplantation, research that mentioned multiple or combined transplants, repeated articles between the bases (considering only one, in the case of repetitions), review articles, studies focused on the pediatric context. Figure 1 below presents, in a simplified way, the steps performed in the selection process of the articles that composed the review.

Figure 1 - Flowchart of the selection of the scientific articles that composed the sample of the integrative review.



RESULTS AND DISCUSSION

The research conducted in the databases: MEDLINE, LILACS and SciELO initially recovered 217 articles. After adopting the methodological criteria mentioned above, 15 articles were selected and analyzed, which composed the present study.

Regarding the distribution of the studies by scientific

bases, a greater number of publications originating from the MEDLINE database were obtained as shown in Table 1. This result may have occurred due to the scope of this base in medical and biomedical publications. **Table 1** - Databases in which the articles were found.

Table 1 - Databases where the articles were found. *Natal, RN, Brazil, 2019.*

Base	Participants	%
SCIELO	03	20%
LILACS	01	6,7%
MEDLINE	11	73,0%
TOTAL	15	100%

As for the scientific production over the years in each base, it was identified that the largest number of studies published, considering the theme, occurred in 2014 with eight studies (53%) frequency. The year 2015 had three studies published, representing the frequency of (20%). The year 2013 also concentrated three publications (20%) of the total number of articles used. In 2012 there was one publication representing (7%). Considering the time frame chosen, there were no publications that met the requirements of this review in 2011.

Most of the studies were published in international journals in English language 11 articles corresponding to (73%) frequency, the national production counted with four articles (27%) of the production, exposed in Portuguese. Table 1 below presents the articles and their respective countries of publication.

Table 1 - Presentation of the scientific articles and the respective country of publication of the studies. *Natal, RN, Brazil 2019.*

	Title	Country
1	Analysis of the physical aspects of quality of life of kidney recipients	Brazil
2	Assessment of health-related quality of life of patients after kidney transplantation in comparison with hemodialysis and peritoneal dialysis	Poland
3	Association between work, income and quality of life of kidney transplant recipients in the municipality of Teresina, PI, Brazil.	Brazil
4	Depression, Anxiety, Resilience and Coping Pre and Post Kidney Transplantation - Initial Findings from the Psychiatric Impairments in Kidney Transplantation (PI-KT)-Study	Germany
5	Effect of applying continuous care model on quality of life among kidney transplant patients: a randomized clinical trial.	Iran
6	Effects of modality change on health-related quality of life	USA
7	Evaluation of Quality of Life Early and Late After Kidney Transplantation	Turkey
8	Factors associated with health-related quality of life in renal transplant recipients: results of a national survey in France.	France
9	Factors associated with the health-related quality of life of kidney transplant recipients in Teresina, Piauí, 2010.	Brazil
10	From dialysis to transplantation: a 5-year longitudinal study on self-reported quality of life.	Norway
11	Health related quality of life of long-term kidney transplantation recipients.	Taiwan
12	Health-related quality of life in kidney transplant patients and non-renal replacement therapy patients with chronic kidney disease stages 3b-4	Norway
13	Health-related quality of life after kidney transplantation: who benefits the most?	Finland
14	Changes in quality of life after kidney transplantation and related factors	Brazil
15	Relationship between immunosuppressive medications adherence and quality of life and some patient factors in renal transplant patients in Iran.	Iran

Regarding the level of evidence, seven studies belonged to level IV of scientific evidence, five of the researches corresponded to year level VI, two studies referred to level II of evidence and one publication represented level

III of evidence. It should be noted that the following correspondence was used for analysis: I- Systematic Review or Meta-analysis, II- Controlled Randomized Study, III- Controlled Randomized Study, IV- Control Case Study or Cohort Study, V- Systematic Review of Qualitative or Descriptive Studies, VI- Qualitative or Descriptive Study, VII- Opinion or Consensus. As suggested by the literature.¹¹

For a global understanding of the productions, it was chosen to expose table II that presents the characterization of the published articles.

Table 2 - Characterization of published articles. *Natal, RN, Brazil, 2019.*

Authors	Objective	Level of Evidence	Result/Considerations
Mendonça A, Salvetti M, Maia E, Silva A, Torres G.	Objective: to identify the main factors of physical domain modified after kidney transplantation and to analyze the influence of these aspects on the perception of general QL.	IV	Kidney transplantation promoted improvement in all physical aspects of QL. The factors that showed the strongest correlation with overall QL before transplantation were workability and pain. After the transplantation, the perception of the need for treatment was the factor that showed the strongest correlation with overall QL.
Czyzewski L, Sanko-Resme J, Wyzgal J, Kurowski A.	Objective: to evaluate the QL of patients with end-stage renal failure, depending on the method of Replacement Renal Therapy used.	III	The Health-Related Quality of Life (HRQL) of patients with end-stage renal failure is different depending on the Replacement Renal Therapy method. Higher QL values were presented by patients after kidney transplantation, lower scores were found in patients with peritoneal dialysis and lower rates in patients with hemolysis.
Costa J, Nogueira L.	Objective: to analyze the association between income, work and QL of people undergoing kidney transplantation.	VI	The average HRQL for the physical component was 63.8 (SD = 29.4), and for the mental component, 65.6 (SD = 29.2) Labor activity is significant for kidney transplant recipients, and special attention should be given by the multiprofessional team in the search for strategies that favor and encourage their maintenance and reinsertion in the labor market.
Helge H, Matthias E, Michael S, Wiesener S, Katharina H, Teja W, Georg S, Kai-Uwe E, Johannes K, Juan M.	Objective: to analyze the prevalence rates of psychiatric/depressive symptoms and the HRQL of kidney transplanted patients compared to chronic non-transplanted kidney patients.	IV	Both patients who received the kidney from cadaver donors with chronic renal pretransplantation patients showed notable deficiencies in HRQL. The prevalence of depressive symptoms and anxiety was not significantly different between the two groups.
Raiesifar A, Tayebi A, Najafi M, Ebadi A, Einollahi B, Tabibi H, Bozorgzad P, Saiti A.	Objective: to compare the effect of the application of the continuous care model on QL of renal transplanted patients.	II	The QL score increased in both kidney transplant recipient groups, but the mean scores of the experimental group were significantly higher than those of the control group at 1, 2, and 3 months. The continuous attention model can improve the QL of kidney transplanted patients.
Painter P, Krasnoff J, Kuskowski M, Frassetto L, Johansen K.	Objective: to report changes in QL associated with changes in treatment modality among patients requiring renal replacement therapy.	IV	The transplant resulted in significant improvements in six of the eight generic QL scales and in four of the seven specific disease scales. Daily hemodialysis resulted in improvements in the effects of renal disease. Changing modality for transplantation resulted in a significant improvement of HRQL, reaching levels similar to controls.
Nurettin A, Melih A, Vahhac A, Utkan S, Bülent C, Mustafa Ç, Ramazan D.	Objective: to compare the QL of donors and recipients of kidney transplantation from the third to the ninth month of postoperative.	IV	An increase in QL (in some subgroups) was observed in 9 months postoperatively. Donors and recipients had similar QL (except in physical functioning). QL was better in younger and male patients and people with higher education levels.
Gentile S, Beauger D, Speyer E, Jouve E, Dussol B, Jacquelinet C, Briançon S.	Objective: to identify factors associated with HRQL, through an analysis of socio-demographic and clinical variables of a representative sample of kidney transplanted patients.	II	The worst HRQL predictors were the variables: side effects, infectious disease, recent hospitalization and female gender. The originality of the findings of the study was to identify that the side effects of health treatment and unemployment were negative in the QL of kidney transplanted patients.

Costa J, Nogueira L.	Objective: to evaluate HRQL and associated factors in kidney transplant recipients in the municipality of Teresina.	VI	Losses in physical health and in functional and mental capacities can impose limits and prevent self-care, being necessary collective and individual actions to prevent aggravation to HRQL, focusing on vulnerability among the elderly.
Nanna L, Bård W, Fredrik B, Amin AG, Anna VR, Ingrid O.	Objective: to evaluate changes in HRQL of patients in transition from dialysis treatment to kidney transplantation, and compare HRQL in transplanted patients with that of the general population.	IV	HRQL improves the transition from dialysis to transplantation, but the relevant clinical change was only achieved in the specific areas of renal disease effect. HRQL was perceived as considerably poorer in kidney transplanted patients than in the general population.
Wei TY, Chiang YJ, Hsieh CY, Weng LC, Lin SC, Lin, MH	Objective: to describe the HRQL of patients receiving kidney transplantation for at least 10 years.	VI	The HRQL of long-term renal transplant patients was generally poorer than the general population. When comparing the HRQL of kidney transplant patients to the general population, age and gender must be taken into account.
Stomer U, Bergrem H, Goransson L.	Objective: to compare the HRQL in 2 groups of patients with Chronic Renal Disease (CRD): 1 group with native kidneys only (group that does not receive replacement therapy) and 1 group with a kidney transplant operation.	IV	QL assessed by means of the Medical Outcomes Study 36 (SF-36) in a group of stable renal transplant patients in stage 3b-4 CRD is comparable to that of a group of patients without renal replacement therapy. However, HRQL on the visual analogue scale was better in the group that did not perform renal replacement therapy.
Ortiz F, Aronen P, Koskinen PK, Malmström R, Finne P, Honkanen EO, Sintonen H, Roine RP.	Objective: To investigate the association between dialysis and HRQL before and after renal transplantation and, secondarily, the association of adherence to medical treatment and its correlation with HRQL.	IV	The study showed that the improvement in HRQL obtained after kidney transplantation is linked to the previous dialysis modality, with additional benefit for patients who performed peritoneal dialysis. In Hemodialysis centers, HRQL was evaluated as the lowest, but was substantially improved with transplantation. The higher HRQL was more common in patients who were employed and needed fewer pills after transplantation.
Mendonça A, Torres G, Salvetti M, Alchieri J, Costa I.	Objective: to identify the changes in QL after kidney transplantation and to verify the influence of socio-demographic factors on the perception of QL	VI	Sociodemographic factors did not influence patients' perception of QL. QL has improved significantly in all areas. The biggest changes were observed in general QL, physical domain and social relations domain
Shabany HM, Mohamad AJ.	Objective: to evaluate the relationship between medication adherence and QL in kidney transplant patients.	VI	The results showed a correlation between medication adherence and QL. There was a significant correlation in the dimensions: health performance, socioeconomic factors, psychological domain and spiritual domain.

Kidney transplantation has been frequently evaluated, especially its effectiveness in increasing longevity and reducing morbidity.¹²⁻¹³ Attention to the subjective aspects and the very QL of the transplanted patient has recently become an interest of research.^{12,14} In a study conducted in Brazil, the authors warn of the importance of evaluating QL, since it is a parameter for measuring the efficacy of substitute therapies.¹⁵

The literature analyzed has shown kidney transplantation to be a widely accepted treatment and the best therapeutic option for patients with irreversible kidney disease.^{12,16-18} Studies indicate that this treatment, when successful, can increase functional capacity by increasing the chances of returning to the life routine prior to the onset of the disease.^{12,19-20}

One of the studies developed in Finland, with 49 patients evaluated in different periods, initially when they were receiving renal replacement therapy and after

the transplantation, pointed out that 57% of all patients on dialysis improved their QL, 21.3% of the patients kept their QL unchanged and 21.3% of the recipients considered that their QL deteriorated. The authors of this research considered clear the benefit of kidney transplantation corroborating what has been reported in the scientific literature.¹³

One of the surveys conducted in Brazil with 147 patients indicated a positive evaluation of QL after kidney transplantation in aspects: functional capacity, general health status, vitality, social and emotional aspects and pain. With the exception of QL improvement was the physical aspects, which in this study, obtained low score.¹²

The mentioned study also pointed out that, the highest scores of QL were from renal recipients with a higher level of education, the lowest scores were from those patients over 60 years old.¹² Similar results were found in another Brazilian study conducted in 2014 with 63 kidney recipients before and after transplantation, the results showed a significant improvement in overall QL after transplantation.¹⁵

The QL of kidney transplant patients is considered better than that of patients undergoing dialysis, however, when compared to the general population and chronic kidney patients under conservative treatment is lower.^{18,21} Legitimising this information, one of the evaluated studies conducted in Twain with 88 patients, showed that they obtained a worse physical and psychological health evaluation compared to the general population.²²

Kidney transplantation presents some particularities of treatment that when not properly managed can become barriers in the search for QL, some of these aspects are: rigorous use of immunosuppressive medications and their side effects, routine medical consultations, possibilities of infections and hospitalizations, fear of loss of graft and others.^{23,24}

A study developed in France, with 1061 patients with renal graft functioning for at least one year, calls attention to the fact that, although positive prerogatives regarding renal transplantation are well consolidated, there are wide differences in QL among the recipient patients.²¹ Regarding the variables that can interfere with QL, the same study mentions that, aspects such as: low load of immunosuppressive drugs, mental health and reinsertion in the labor market, are variables that alter the perception of QL after transplantation.²¹

Higher scores for QL after kidney transplantation were present in patients who were employed and those who used fewer pills.^{13,21} The benefit of transplantation tends to be lower in older patients, patients with multiple comorbidities, or those with repeated infections.^{13,18}

A survey conducted in Iran with 90 kidney recipient patients, separated into an experimental and control group, calls attention to the fact that the application of a “continuous care model” for the health of post-

transplantation patients, allows the detection of possible impediments to QL after transplantation that could benefit these patients.²³ The survey confirms the improvement in QL after transplantation in both groups, but the group that received the “continuous care model” obtained higher QL scores compared to the control group.²³

In the matter of adherence to immunosuppressive medications, a research conducted in Iran with 230 kidney recipients, pointed out the non-adherence to immunosuppressive medications as a condition that can lead to graft loss, reduce QL and even increase the mortality rate of transplanted patients. This result brings to light the co-responsibility of health professionals regarding patient orientation, alerting to the importance of adherence to medication.²⁴

As for labor activity after transplantation, in a study conducted in Brazil in 2014, the researchers pointed out that social coexistence, achieved through work, can help prevent psychopathological conditions such as depression and anxiety. In addition, it can foster self-esteem and stimulate patients’ sense of competence and better QL.²⁵

Regarding the psychological aspects, the depressive and anxiety symptoms are indicative of a lower QL score. Psychosocial factors, such as not having a spouse or being female, were also identified as risk factors for a lower QL.²⁶

The importance of monitoring and intervening in the health and evolution of the QL of transplanted patients is stressed, since the progression of comorbidities, together with side effects of medications, clinical complications and potential psychological problems or the loss of renal graft may lead to worsening of QL in patients after transplantation.^{21,27} Research conducted in Norway complements that lower QL is a predictive factor of mortality in end-stage renal disease patients.²⁷

It is relevant to specify and identify the personal, environmental and clinical factors that influence the results of the transplant and to manage medical and psychological complications that may interfere with the perception of the kidney recipients’ QL is essential for the success of this therapy.²¹ The need for multiprofessional teams to work to improve the patient’s QL even after the transplant is addressed.¹⁸

CONCLUSIONS

With this literature review we can see that post-transplant QL is surrounded by multiple aspects; in this sense, it is essential that professionals, family members and the patient himself acknowledge the unfavorable factors and those who collaborate to promote QL. The scientific evidence of the benefits of transplantation for the renal patient does not exclude the possibility of negative dimensions and complications, which can become stressful and can compromise the patient’s perception of QL.

Considering this, it is important to point out that there

is a need on the part of the health teams to accompany the transplanted patient beyond the clinical and survival evaluation of the organ. Consideration of the emotional, social and clinical aspects of the patient after kidney transplantation is fundamental in establishing better conditions for health and QL. The development of research investigating the QL of kidney transplanted patients can contribute to increase the knowledge on the subject and consequently to a better management of care after kidney transplantation by the teams and the patients themselves. As limitations of the study, one can cite the reduced amount of scientific basis researched.

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