

Quality of Life and Health Profile in Individuals with Parkinson's – Systematic Review

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ABSTRACT

Introduction: The latest research on quality of life in Parkinson's patients has emphasized the importance of a comprehensive approach to the care of these individuals. In addition to motor symptoms, non-motor aspects such as sleep disorders, depression, anxiety, cognitive changes and communication difficulties play a crucial role in the general health and well-being of these patients. **Objective:** Analyze and synthesize the available evidence on the quality of life and health profile in individuals diagnosed with Parkinson's disease.

Methods: This study constitutes a systematic review, classified as exploratory and descriptive. The preparation of the research was a bibliographical search in electronic databases on methods associated with RSL (Systematic Literature Review) and the applications of SMARTER (Simple Multi-Attribute Rating Technique using Exploiting Rankings). The study methodology is a systematic, exploratory and descriptive review, using qualitative and quantitative methods. The bibliographic search covered several databases, with well-defined inclusion and exclusion criteria. Data analysis was conducted by three independent researchers.

Results and discussion: The results revealed 1659 articles, 18 of which were included in the review. The discussion of the findings of the current article can be enriched by a comprehensive analysis of the existing literature that explores various facets of quality of life (QoL) in individuals with Parkinson's disease (PD). Several studies have investigated different dimensions, providing insights into the factors that influence QoL in PD patients.

Conclusion: The findings gathered emphasize the importance of a comprehensive and personalized approach in the treatment of PD, considering not only motor symptoms, but also psychosocial and nutritional aspects and the external context. This integrated approach can serve as a basis for developing more effective strategies to improve QoL in individuals with PD and provide more comprehensive and adaptable support throughout the course of the disease.

KEYWORDS: Quality of life; Health; Parkinson's disease.

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INTRODUCTION

The quality of life and health profile in individuals with Parkinson's represent fundamental areas of study and attention within the field of neuroscience and health (1). Parkinson's disease is a chronic neurodegenerative disease that affects the central nervous system, manifesting mainly through motor symptoms such as tremors, muscle stiffness and coordination difficulties.(2–4). However, its implications go beyond motor aspects, significantly impacting patients' quality of life (5,6).

The latest research on quality of life in Parkinson's patients has emphasized the importance of a comprehensive approach to the care of these individuals (7). In addition to motor symptoms, non-motor aspects such as sleep disorders, depression, anxiety, cognitive changes and communication difficulties play a crucial role in the general health and well-being of these patients (8).

Multidisciplinary strategies, which include not only drug treatments but also rehabilitation therapies, psychological support, adapted physical activities and nutritional interventions, have been increasingly recognized as essential for improving quality of life and slowing the progression of symptoms in people with Parkinson's. Personalizing treatment, taking into account individual needs and the specific phase of the disease, is seen as a promising way to optimize results (9).

Furthermore, advances in genetic research, neuroimaging, and innovative therapies such as deep brain stimulation and gene therapy offer exciting prospects for the management and treatment of Parkinson's, potentially improving not only motor symptoms but also addressing non-motor and , consequently, increasing the quality of life of patients (10).

Understanding the complexity and multidimensionality of Parkinson's impact on the quality of life and health profile of affected individuals is fundamental to developing more effective and compassionate approaches to the care of these patients, thus promoting greater well-being and a better quality of life for those who live with this neurodegenerative condition.

In this context, the objective of this systematic review was to analyze and synthesize the available evidence on the quality of life and health profile in individuals diagnosed with Parkinson's disease. We examined relevant studies published in various scientific sources to comprehensively understand how the condition impacts the quality of life of these patients, considering both physical and psychosocial aspects. Furthermore, we seek to identify patterns or correlations between the specific health profile, the stage of the disease and the perception of quality of life, with the aim of providing a comprehensive view that can contribute to the development of more effective management and intervention strategies for this population.

METHODS

This study constitutes a systematic review, classified as exploratory and descriptive. The preparation of the research was a bibliographical search in electronic databases on methods associated with RSL (Systematic Literature Review) and the applications of SMARTER (Simple Multi-Attribute Rating Technique using Exploiting Rankings). The work carried out is of a qualitative and quantitative nature. Qualitative data analysis was carried out intuitively and inductively during the survey of the theoretical framework. It is also quantitative through the use of the multi-criteria method. In addition, there is also a numerical experimental study in order to simulate an article selection situation based on the observed criteria.

Based on bibliographical research, they were located in the following databases: US National Library of Medicine (PubMed), Web of Science; Science Direct (Elsevier); Wiley; SpringerLink; Taylor and Francis and EBSCO. In addition, searches were carried out using bibliographic references of studies that relevantly addressed the topic on the Google Scholar search platform (Google, USA).

The search in the databases was carried out using the terminologies registered in the Health Sciences Descriptors created by the Virtual Health Library developed from the Medical Subject Headings of the US National Library of Medicine, which allows the use of common terminology in Portuguese, English and Spanish. The present study sought to investigate the literature on the quality of life and health profile of individuals with Parkinson's. To this end, the descriptors "Quality of Life; Health and Parkinson's", initially in English, and additionally in Spanish and Portuguese.

As a tool to support decision-making in the selection and prioritization of articles, a set of criteria were considered essential to represent the state of the art of the topic under study. This method has the following characteristics: (i) rigorous logic allows the method to be accepted as a decision support tool; (ii) simple to understand and apply with easy-to-interpret results.

References from selected works were also searched for other documents of potential interest. Once qualified for full-text assessment, articles were included in the qualitative review if they met the following inclusion criteria: a) contained data on quality of life; b) health profile and c) Parkinson's disease. Articles were excluded if they were reports, banners or conference abstracts.

Three independent researchers extracted data from articles that met the inclusion criteria and recorded them in a "Data Extraction Form" generated in Microsoft Excel on the topic covered. From this form, the authors and year of publication, title, sample size (n), and conclusion of the studies were included, which will be shown in the results in table 1. There was no review of confidential health information and the study was non-interventional. Therefore, ethics committee approval was not necessary. To theIn the

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end, the result obtained totaled 18 articles that covered the desired characteristics for the study.

RESULTS

A comprehensive systematic search of the literature yielded a total of 1659 articles relating to the topic. From this it was chosen the SMARTER method (Simple Multi-Attribute

Rating Technique using Exploiting Rankings). Of these studies, 115 articles were suitable for full-text screening and 77 articles were included for data extraction. Of these, 59 studies were excluded due to data overlap. Here, 18 articles were included for systematic review. Figure 1 describes the strategy for selecting articles on the topic in question, summarized in Table 1.

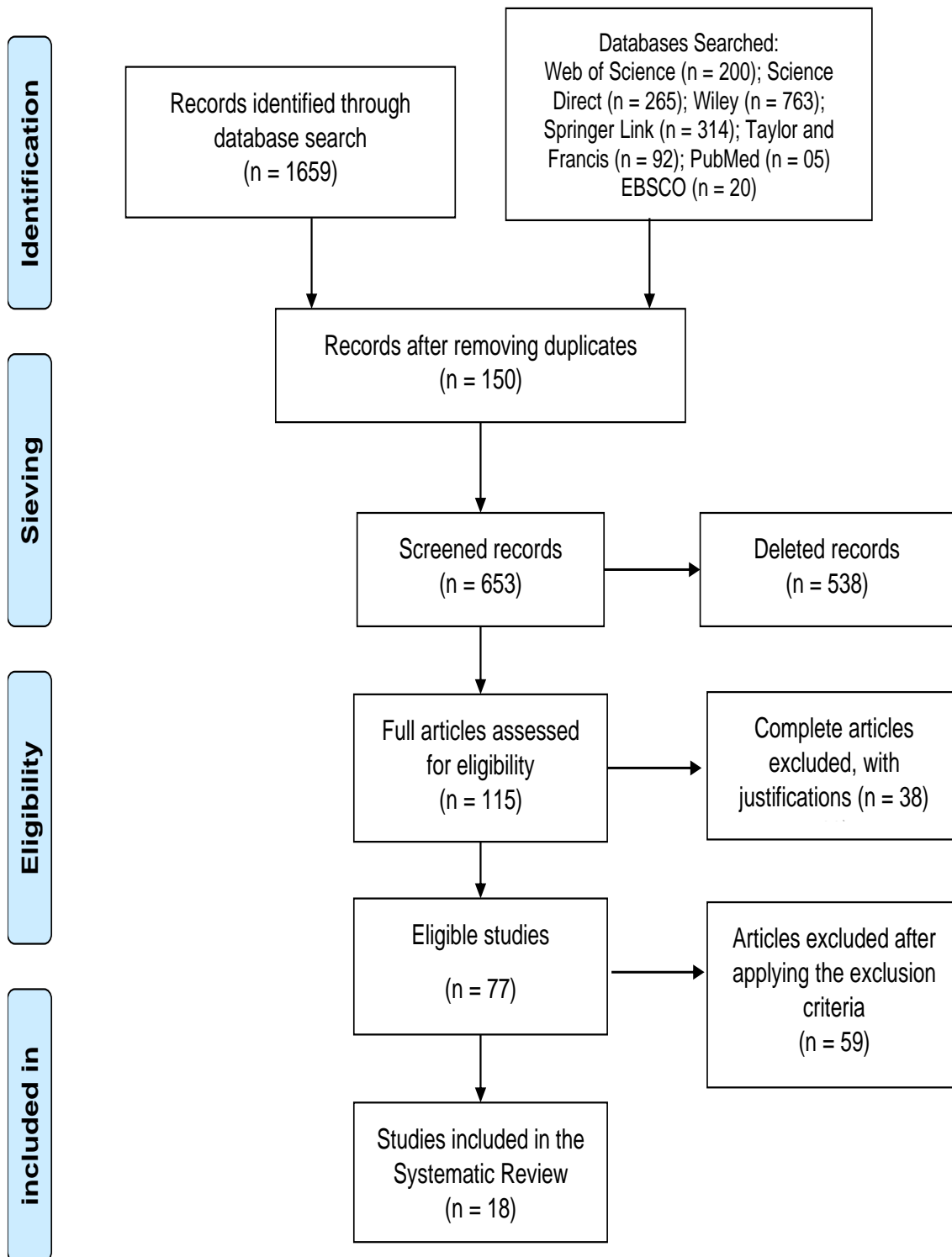


Figure 1. Article search strategy

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Author/Year	Title	N	Methods	Conclusion of the Study
MENG et al. (2022)	The quality of life in patients with Parkinson's disease: Focus on gender difference	172	Cross-sectional study	Gender disparities correlate with well-being in early and middle stages of Parkinson's disease in China. Women who face the condition experience a lower quality of life than men, notably in relation to physical discomfort, stigmatization and emotional balance.
CRISPINO et al. (2020)	Gender Differences and Quality of Life in Parkinson's Disease	ND	Revision	Several studies have highlighted gender differences in health-related quality of life (HRQOL) in patients with Parkinson's disease (PD). The slower progression of symptoms in women is attributed to elevated dopamine levels due to estrogenic activity. Women with PD more frequently face depression and anxiety, while in men, tremors are associated with motor impairment and more severe striatal degeneration, resulting in greater disability.
TRANG et al. (2020)	Predictors of general and health-related quality of life in Parkinson's disease and related disorders including caregiver perspectives	210	Cross-sectional study	There are distinct discrepancies in the factors determining global quality of life, health-related quality of life and caregivers' perceptions of patients' global quality of life. These disparities have significant implications for both clinical research and clinical care models.
CANDEL-PARRA et al. (2022)	Predictive Model of Quality of Life in Patients with Parkinson's Disease	155	Analytical Observational Study	A prediction model, composed of nine variables, demonstrated an effective discriminatory capacity in anticipating the quality of life of patients with Parkinson's disease over one and two years of follow-up.
GRUBER et al. (2020)	Association between malnutrition, clinical parameters and health-related quality of life in elderly hospitalized patients with Parkinson's disease: A cross-sectional study	92	Cross-sectional study	Older men with long-term, advanced stages of Parkinson's disease are more likely to be malnourished or at risk of malnutrition. Malnutrition is primarily associated with low emotional well-being, suggesting that addressing depression and anxiety, along with dietary interventions and physical activity, may improve nutritional status in these individuals. It is recommended that the Minimum Nutritional Assessment not be used in isolation, but rather in conjunction with other assessments of cognition and depression in people with advanced Parkinson's disease.
SUZUKI et al. (2021)	Impact of the COVID-19 pandemic on the quality of life of patients with Parkinson's disease and their caregivers: a single-center survey in Tochigi Prefecture	100	Cross-sectional study	The study demonstrated the adverse repercussions of the COVID-19 pandemic on health-related quality of life and its determining factors in individuals with Parkinson's disease and their caregivers.
LUBOMSKI; DAVIS; SUE (2021)	Health-related quality of life for patients with Parkinson's disease and their caregivers	184	Cross-sectional study	Individuals with Parkinson's disease expressed a reduction in health-related quality of life, with motor symptoms and non-motor symptoms having negative effects on this quality of life.
SU et al. (2021)	Correlation between depression and quality of life in patients with Parkinson's disease	300	Cross-sectional study	Individuals diagnosed with Parkinson's disease who face psychological disorders such as anxiety and depression can result in a notable deterioration in quality of life in all areas.
ZHAO et al. (2021)	Quality of life in Parkinson's disease: a	20 studies	Systematic Review and	Given the adverse influence of low quality of life on daily activities and functional performance in

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	systematic review and meta-analysis of studies		Meta-Analysis	individuals with Parkinson's disease, it is crucial to develop effective strategies to improve well-being in this population.
FAN et al. (2020)	Determinants of quality of life according to cognitive status in Parkinson's disease	600	Cross-sectional study	Quality of life was more strongly affected by depression than by motor function when there was cognitive impairment in Parkinson's disease. To improve well-being, healthcare professionals may need to focus on specific elements, taking into account the cognitive status of patients with Parkinson's disease.
SHALASH et al. (2020)	Mental health, physical activity and quality of life in Parkinson's disease during the COVID-19 pandemic	38	Cross-sectional study	During the COVID-19 pandemic, patients with Parkinson's disease have reported an adverse influence on their mental health, physical activity, and healthcare. Compared to controls, patients with Parkinson's disease demonstrated higher levels of stress, depression, anxiety, reduced physical activity, and a lower quality of life. These results reinforce the finding of the negative impact on the mental health, physical activity and quality of life of patients with PD during the context of the COVID-19 pandemic.
SANTOS GARCÍA et al. (2021)	Predictors of clinically significant quality of life impairment in Parkinson's disease	ND	Multicenter, Observational, Longitudinal-Prospective Study	age, sex, mood and non-motor impairment were correlated with a clinically significant impairment in Health-Related Quality of Life after the two-year follow-up period in patients with Parkinson's disease
CHEN et al. (2020)	Effect of exercise on quality of life in Parkinson's disease: a systematic review and meta-analysis	20 Studies	Systematic Review and Meta-Analysis	Quality of life in patients with Parkinson's disease is significantly improved by exercise interventions, especially aerobic exercise, dance, and Tai Chi. It was observed that to obtain substantial benefits, it is necessary to carry out these interventions for a minimum period of 12 weeks.
SCHRAG; QUINN (2020)	What contributes to quality of life in Parkinson's disease: a re-evaluation	ND	ND	Assessment of Health-Related Quality of Life (HRQOL), along with analysis of non-motor and motor characteristics, now plays a crucial role in our assessment of the severity and impact of Parkinson's disease in clinical trials and clinical practice.
TOLOSA et al. (2021)	The Parkinson's Real-World Impact Assessment (PRISM) Study: A European Survey of the Burden of Parkinson's Disease in Patients and their Carers	1117	Cross-sectional observational study	The PRISM study offers insights into the lived experience of people with Parkinson's disease (PD) and their caregivers, highlighting the numerous challenges they face on a daily basis. Furthermore, the research provides relevant data on current PD treatment practices in Europe.
TANG et al. (2020)	Cognitive function and quality of life in Parkinson's disease: a cross-sectional study	600	Cross-sectional study	The different cognitive domains make different contributions to Quality of Life in cases of Parkinson's disease (PD). These conclusions suggest the possibility of health professionals directing specific efforts to improve certain cognitive aspects, aiming to improve the quality of life of patients with PD.
ROSQVIST et al. (2021)	Factors associated with health-related quality of life in late-stage Parkinson's disease	401	Multicenter Longitudinal Care of Late Stage Parkinsonism (CLaSP) Cohort Study	The results highlight the need to improve the treatment of both motor and non-motor symptoms in order to improve Health-Related Quality of Life in patients with advanced-stage Parkinson's disease.

<p>CHUQUILÍN-ARISTA; ÁLVAREZ-AVELLÓN; MENÉNDEZ-GONZÁLEZ (2020)</p>	<p>Prevalence of Depression and Anxiety in Parkinson Disease and Impact on Quality of Life: A Community-Based Study in Spain</p>	<p>95</p>	<p>Observational and Descriptive Study</p>	<p>Depression occurs in approximately one third of cases, while anxiety is present in two thirds of people with Parkinson's disease (PD) in community settings in Spain. Both depression and anxiety have a significantly negative impact on quality of life associated with PD.</p>
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*ND – Nothing Described

DISCUSSION

The discussion of the findings of the current article can be enriched by a comprehensive analysis of the existing literature that explores various facets of quality of life (QoL) in individuals with Parkinson's disease (PD). Several studies have investigated different dimensions, providing insights into the factors that influence QoL in PD patients.

In the study of Meng et al. (2022), "Quality of life in patients with Parkinson's disease: focus on gender differences," the authors emphasize the importance of considering gender disparities in QoL outcomes. Understanding these differences may be critical to tailoring interventions that address the unique challenges faced by male and female patients with PD. Likewise, the article "Gender Differences and Quality of Life in Parkinson's Disease" explores aspects related to gender that impact QoL in PD. This research contributes valuable information about the nuanced experiences of male and female patients, assisting in the development of gender-specific strategies to improve QOL (12).

The study, "Predictors of general and health-related quality of life in Parkinson's disease and related disorders, including caregiver perspectives," offers a comprehensive approach by considering not only patient-related factors, but also the caregiver's perspective. This view is of paramount importance for understanding the multifaceted determinants of QoL in patients with PD (13) Lubomski; Davis and Sue (2021), expanded the discussion by including the perspective of caregivers. By recognizing the impact of the disease not only on patients but also on their caregivers, the study highlighted the importance of a more comprehensive approach to measuring QoL. Caregiver burden, the quality of support provided and family dynamics are elements that emerge as fundamental to a complete understanding of QoL in this population.

Addressing the impact of malnutrition on QoL, the cross-sectional study entitled "Association between malnutrition, clinical parameters, and health-related quality of life in elderly hospitalized patients with Parkinson's disease" highlights the importance of nutritional aspects in general well-being (15).

Another extremely important point is mentioned by Su et al. (2021), which explored the relationship between depression and QoL in patients with PD. This study highlighted the heterogeneous nature of QoL, emphasizing that mental health plays a critical role. Depression, often

associated with PD, demonstrates a significant correlation with QOL, suggesting that interventions targeting mental health may be crucial to improving QOL in this population.

The global COVID-19 pandemic has also been a focus of investigation, as evidenced by the article "Impact of the COVID-19 pandemic on the quality of life of patients with Parkinson's disease and their caregivers: a single-center survey in Tochigi Prefecture." This study explores the unique challenges presented by the pandemic, offering a better understanding of its repercussions on the QoL of PD patients and their caregivers (16). The article "Impact of the COVID-19 pandemic on the quality of life of patients with Parkinson's disease and their caregivers: a single-center survey in Tochigi Prefecture" addresses the specific influence of the COVID-19 pandemic on the QoL of patients with PD and their caregivers. This study highlighted the need to consider external events when assessing QoL, especially in vulnerable populations. The pandemic, by altering treatment routines, access to care and social interaction, emerged as a significant factor in the QoL of these patients and their caregivers (16).

The article "Predictive Model of Quality of Life in Patients with Parkinson's Disease" proposes a predictive model to evaluate QoL in patients with PD. This study seeks to identify key factors that influence QoL, providing valuable insights for personalizing treatment. By incorporating variables such as severity of motor symptoms, social support and comorbidities, researchers were able to build a model that offers a more complete approach to assessing QoL (14). Furthermore, the meta-analysis entitled "Quality of life in Parkinson's disease: a systematic review and meta-analysis of studies" consolidates findings from multiple studies, providing a broader perspective on QoL outcomes and facilitating a more comprehensive understanding of the situation general (19).

These cited studies collectively contribute to knowledge and highlight the complexity of QoL in PD, considering diverse factors, such as gender differences, caregiver perspectives, nutritional aspects and the unprecedented challenges presented by external factors, such as the COVID-19 pandemic. Personalization of treatment, considering clinical, social and psychological factors, emerges as an imperative need to optimize QoL in this challenging population. Integrating these findings enhances our understanding of the multifaceted nature of QoL in patients with PD, guiding the development of more effective interventions and support strategies. Furthermore, the

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incorporation of external events, such as the COVID-19 pandemic, highlights the need for flexibility in intervention strategies to address emerging challenges.

FINAL CONSIDERATIONS

A comprehensive analysis of the literature on quality of life (QOL) in individuals with Parkinson's disease (PD) reveals a multifactorial complexity in the influence of this neurodegenerative disorder. The studies examined, which address diverse dimensions such as gender disparities, caregiver perspectives, nutritional impact, and challenges associated with the COVID-19 pandemic, offer valuable insights.

Understanding gender differences in QoL experiences highlights the need for personalized strategies to address the specific challenges faced by men and women with PD. Furthermore, the inclusion of the caregiver's perspective provides a broad view of QoL, recognizing the interconnection between the patient's well-being and the support provided by their caregivers.

The importance of nutritional aspects in QOL highlights the need for integrated approaches that consider not only motor symptoms, but also aspects related to general health and nutrition. The COVID-19 pandemic has emerged as a significant external factor, adversely impacting the QOL of PD patients and requiring adaptations in management strategies.

Thus, the findings gathered emphasize the importance of a comprehensive and personalized approach in the treatment of PD, considering not only motor symptoms, but also psychosocial and nutritional aspects and the external context. This integrated approach can serve as a basis for developing more effective strategies to improve QoL in individuals with PD and provide more comprehensive and adaptable support throughout the course of the disease.

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