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Social Communication of Parkinson Disease Patients: A Narrative Review

Hossein Meskar[1], Goli Aezzi[1], Ali Zareie[1], Mehran Frouzanian[2], Amirsaleh Abdollahi[2], Ali Abbaskhani Davanloo[1], Farshad Hassanzadeh Kiabi[2]

[1]Department of Anesthesiology, Faculty of Medicine, Mazandaran University of Medical Sciences, Sari, Iran
[2]Student Research Center, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

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Abstract

Background: Parkinson's disease (PD) is a neurodegenerative disorder that affects both motor and non-motor functions, with communication impairments playing a significant role in patients' quality of life and mental health. While motor symptoms are widely addressed, difficulties in speech, language comprehension, and cognitive processing are also critical challenges. This review explores the communication difficulties faced by PD patients, the impact on daily life, and strategies to improve communication, with a particular focus on how medical treatments, including anesthesiology, influence these outcomes. **Methods:** A narrative review of studies published through October 2024 was conducted using digital repositories such as PubMed, Scopus, and Web of Science. The focus was on research related to speech, language, cognitive functions, and social support for PD patients. **Results:** PD patients frequently experience challenges in speech production, language comprehension, and cognitive processing, leading to diminished social interactions, isolation, and psychological distress. Medical treatments such as deep brain stimulation (DBS) and anesthesia during surgeries can further impact cognitive function and postoperative communication, necessitating careful anesthetic management. Effective strategies like augmentative and alternative communication (AAC) devices, patient-centered care, and information communication technologies (ICTs) have shown potential in improving communication. Strong social support systems and improved health literacy are also essential for enhancing well-being and treatment adherence. **Conclusion:** A holistic, multidisciplinary approach that integrates personalized communication strategies, robust social support, and specialized anesthetic management can significantly improve communication abilities and the overall quality of life for individuals with Parkinson's disease.

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Introduction:

Parkinson's disease is a sophisticated condition that affects not only motor functions but also communication abilities, leading to significant challenges in everyday conversations (1,2). Persons with Parkinson's ailment frequently encounter challenges with verbal expression, communication, and mental capabilities, leading to hindered dialogue and societal engagements (3,4). The

Correspondence:
Mehran Frouzanian
Student Research Center, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran
E-mail: frouzanian@gmail.com

impact of these communication changes on the lives of people with Parkinson's disease is substantial, affecting their ability to participate in conversations, maintain relationships, and engage in social activities (5).

Efficient communication methods are vital to assist people with Parkinson's disease and their conversation partners (1,2). Studies have demonstrated that a thorough comprehension of how Parkinson's disease impacts communication, along with expertise in applying communication techniques, are essential for effective interactions (1). Furthermore, evaluations and treatments should be grounded in a comprehensive viewpoint on communication, taking into account the individual's priorities and needs (2). The inclusion of close communication partners in assessment and intervention is also vital, as they play a significant role in facilitating effective communication (2,4). By adopting a holistic approach to communication and providing personalized support, individuals with Parkinson's disease can better navigate the challenges of communication and maintain their social connections (3,5).

Effective communication of Parkinson's patients and their doctors is essential for building trust, ensuring patient satisfaction, and improving health outcomes (6-8). However, various barriers can hinder communication, including patient-level factors including mental decline and hesitancy to mention signs, support-person-related elements like nonexistence or insufficient engagement, and doctor-related aspects such as preoccupation with devices or insufficient recognition of the weight of off times (7).

To overcome these barriers, physicians can adopt a more patient-centered approach, characterized by empathy, respect, and active listening (7). This approach can facilitate open and honest communication, enabling patients to express their concerns and needs (6). Additionally, the use of instruments like household surveys, and cellular device recordings can assist interaction and provide valuable insights into the patient's experience (7). A shift towards participatory medicine, where patients are empowered to assume a proactive position in their treatment, could also lead to more effective management of Parkinson's disease (8). By striking a balance between detachment and empathy, medical experts can offer superior treatment that meets the distinct requirements of every individual (9). Improving doctor-patient interaction is critical for improving health results and boosting the standard of existence for persons with Parkinson's disease (6,7).

Patient engagement strategies, such as active participation and involvement in study design, can lead to more effective and personalized care (10). For instance, a study on deep brain stimulation (DBS) patients found that client feedback assisted in shaping research-planning sessions and assistance frameworks, highlighting the significance of client involvement in organizing ongoing investigations (10). Digital self-care resources, such as smartphone applications and wearable devices, can also improve tailored treatment in Parkinson’s disease by offering support and enhancing communication between clients and medical professionals (11). Nevertheless, additional studies are required to confirm that these resources satisfy medical professionals' expert requirements and can seamlessly integrate into regular clinical practices (11). A personalized and multidisciplinary rehabilitation pathway can also be efficacious in enhancing cognitive function, especially executive functions, in individuals with Parkinson's disease (12). Moreover, community-based methods can improve diverse participant recruitment and cultivate diversity in investigative participation for marginalized groups in Parkinson's ailment (13). By prioritizing patient engagement and using innovative approaches, healthcare providers can develop more effective treatment strategies and enhance the general standard of living for people with Parkinson's ailment (10-13).

Nonpharmacologic management strategies, such as physical, occupational, and speech therapy, exercise, and good nutrition, can also play an important role in managing the disease (14-16). Additionally, self-management programs like the Swedish National Parkinson School can facilitate an optimistic attitude and perspective on existence, enabling patients to acquire understanding and skills to comprehend, adjust, and manage their chronic condition (16).

Patient education is essential in Parkinson's management, as it enables patients and their families to develop strategies to cope with lifestyle changes and take control over the disease (14,15). Instruction emphasizing the handling of everyday activities can assist individuals and their family members in undergoing a positive impact on their lives, gaining knowledge and skills to handle the disease (16). Moreover, self-management support programs can provide patients with the necessary tools and resources to manage their condition effectively (16). By prioritizing patient education and empowerment, healthcare providers can improve health outcomes and enhance the standards of living for individuals with Parkinson's disease (14-16).

Neuroscientists have pinpointed methods for managing caregiver-patient conflicts and brokering driving security, underscoring the significance of familial instruction and psychological assistance (17). Nevertheless, unfulfilled caregiver requirements persist, especially in the realm of psychological assistance, relief care, and backing for imbalanced gender roles in the Parkinson's disease caregiving journey (17).

Individuals with Parkinson's disease and their care partners frequently opt to disclose or conceal information from healthcare providers, and constraints in communication must be acknowledged and addressed in regular care to promote honest disclosure of unmet palliative care and other needs (18). Caregivers yearn for access to emotional backing and education about the progression of Parkinson's disease, and they remark on the effect of the disease on their social life and communication challenges between them and the patient (19). As the existing literature highlights the complexities of social communication in Parkinson's disease patients, underscoring the significant challenges in everyday conversations and relationships, we aimed to investigate the nuances of communication in this population; notably, the current research often overlooks the dynamic interplay between patients, caregivers, and healthcare providers, and the innovative strategies that can be employed to enhance communication and improve health outcomes. This research aims to tackle this information void by exploring the multifaceted aspects of social communication in Parkinson's disease, with a particular emphasis on the development of personalized and patient-centered approaches that prioritize effective communication, empathy, and collaboration. By doing so, this research aims to provide novel insights into the complexities of social communication in Parkinson's disease, showing the unmet needs of patients, caregivers, and healthcare providers, and ultimately informing the development of more effective and supportive care strategies.

Social communication of Parkinson’s disease patients

Persons with Parkinson's ailment frequently encounter disruptions in the creation and understanding of social interaction, resulting in difficulties in conveying and recognizing emotions, social dialogue, irony, and mirth. Studies have indicated that individuals with Parkinson's ailment might opt to disclose or conceal details from healthcare providers, highlighting the need for effective communication strategies (18). To enhance the standard of living for individuals with Parkinson's disease, it is essential to develop social communication interventions that address these challenges (21). By understanding the effect of Parkinson's ailment on interpersonal interaction, healthcare professionals can better support patients and their care partners in communicating effectively (22).

Studies have consistently indicated that individuals with PD who have strong social support networks tend to exhibit better psychological outcomes, including reduced levels of anxiety and depression (23,24). This is because social aid furnishes a sensation of inclusion, diminishes sensations of loneliness, and supplies emotional and practical assistance, which are crucial for coping with the challenges posed by the disease (25). Furthermore, studies have highlighted the importance of social support in enhancing the overall quality of life for individuals with Parkinson's disease, with factors such as the level of satisfaction with social support and the presence of close relationships being significant predictors of psychological well-being (23,26). The correlation among communal assistance and psychological resilience in PD patients has also been explored, with findings indicating that social support is a key factor influencing psychological resilience, alongside coping styles such as confrontation and avoidance (27). Therefore, it is essential to recognize the value of social support in the management of PD and to develop strategies that foster and strengthen social connections for individuals affected by the condition (23-27).

Research has shown that good-quality social care can have a significant impact on the health and well-being of individuals with Parkinson's disease, with aspects such as control, choice, and maintaining independence emerging as key indicators of effective social care (28). Furthermore, social workers are increasingly involved in the care of persons with PD, providing a range of services including support for non-motor symptoms such as anxiety and depression (29,30). Another study has also highlighted the importance of understanding the support systems available for Parkinson's disease management in community settings, as well as the need to ensure that family caregivers have access to necessary health and social services (30).

While much of the focus in managing Parkinson’s disease (PD) centers on motor and cognitive symptoms, there is an often overlooked aspect that significantly impacts the patient's quality of life: the communication difficulties that arise due to both the disease itself and the treatments involved. Addressing these challenges is not only important for enhancing social engagement but also for improving overall treatment adherence and outcomes. However, it is essential to consider how various medical interventions, including anesthesiology, intersect with these communication barriers.

Anesthesia, especially in the context of PD surgeries and procedures, can directly influence both motor functions and cognitive processes that are crucial for effective communication. Surgical treatments like deep brain stimulation (DBS), commonly used for PD, and various pain management strategies often require careful anesthetic management. The effects of anesthesia, sedative agents, and post-operative recovery can have significant consequences on a patient's ability to interact and engage in meaningful dialogue, making it essential to integrate anesthesiology into the broader treatment plan for PD patients. Understanding the relationship between anesthesia and communication helps healthcare providers create a more comprehensive, patient-centered approach to managing both the physical and social aspects of Parkinson's disease.

Anesthesia and Communication Challenges in Parkinson's Disease

Anesthesia plays a crucial role in PD management, particularly during surgical interventions such as DBS, where the anesthetic approach may influence both motor and non-motor outcomes, including communication. The use of general anesthesia or local anesthesia with sedation requires careful consideration due to the unique neurophysiological changes in PD patients. These changes can alter their response to anesthetics, potentially leading to difficulties in communication post-surgery. Managing sedation in PD patients is complex due to factors like altered dopamine systems and cognitive decline, which can complicate postoperative communication and social interaction.

Effective anesthesia management is especially critical in reducing postoperative cognitive dysfunction (POCD), a common issue among PD patients. POCD can significantly impair speech, language, and cognitive functions, hindering patients' ability to engage socially. Studies show that anesthetics like propofol and sevoflurane, commonly used during surgeries, may exacerbate cognitive deficits in PD patients, resulting in more pronounced communication issues after procedures. Optimizing anesthesia choices could reduce cognitive deterioration, allowing for better communication and smoother recovery (20,21).

In DBS procedures, anesthesiologists must work closely with neurologists to balance sedation and communication. During DBS, patients are often awake to provide real-time feedback, which helps in fine-tuning electrode placement. Local anesthesia with sedation can facilitate this process, maintaining cognitive clarity while reducing discomfort. However, for patients undergoing more invasive surgeries requiring general anesthesia, communication challenges may increase postoperatively due to sedative effects (22).

Anesthesia in Pain Management and Communication

Chronic pain is another significant challenge for PD patients, often affecting their ability to engage in meaningful communication. Anesthesiologists can contribute by implementing effective pain management strategies, such as multimodal analgesia, to minimize the need for opioids, which can impair cognitive function and communication. Regional anesthesia or the use of non-opioid analgesics can help reduce the cognitive side effects that may arise from opioid use, thereby improving patients' ability to communicate with healthcare providers and caregivers (23).

Sedation and Cognitive Function in PD

Sedation for diagnostic or therapeutic procedures is often necessary for PD patients, but the choice of sedative is crucial in preventing cognitive and communication impairments. Sedative agents, such as benzodiazepines, may further compromise cognitive abilities in PD patients, making it more difficult for them to articulate concerns or provide feedback during assessments. A careful balance of sedation depth is necessary to ensure that patients can still communicate effectively while minimizing discomfort and cognitive disturbances (24,25).

Communication Aids in Parkinson's Disease

Persons with Parkinson's ailment frequently encounter challenges with talking, language, and cognitive functions, which can result in impaired communication and social interactions (31). Effective communication strategies can help alleviate these challenges and enhance the standard of living for persons with PD (32).

Research has shown that communication strategies such as the application of AAC devices can be effective in improving communication in individuals with Parkinson's disease (33). Additionally, patient-centered care approaches can also improve communication outcomes by prioritizing the unique needs and preferences of individuals with Parkinson's disease (34,35).

The utilization of information and communication technologies (ICTs) is also a hopeful method to assist pharmacotherapy for the conduct and mental symptoms of dementia (36). ICTs can offer a way to consistently and precisely track the character, occurrence, intensity, effect, advancement, and reaction to treatment of these symptoms, which is presently a major obstacle in healthcare (36). Additionally, digital indicators can aid in more efficient pharmaceutical studies and offer a deeper comprehension of disease mechanisms. By harnessing ICTs and fostering awareness and education, healthcare professionals can devise novel approaches to manage and support individuals with neurodegenerative diseases, ultimately improving their communication and quality of life (36,37,43,44)

Health literacy and communication

Health literacy and communication are vital components in the management of Parkinson's disease, significantly impacting patients' ability to navigate their healthcare and maintain their well-being. Health literacy, defined as the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions, is particularly crucial for Parkinson's disease patients due to the complexity of their condition and the multifaceted nature of their care (38-40). Patients with higher health literacy levels are better equipped to understand their diagnosis, treatment options, and the importance of adherence to medication regimens, which are all critical for managing symptoms and slowing disease progression (38,39).

Communication, both between patients and healthcare providers and among patients themselves, plays a pivotal role in enhancing health literacy. Effective communication ensures that patients receive clear, understandable information about their condition, which can empower them to take an active role in their care (39,41). For instance, clear and concise communication from healthcare providers can help patients understand the benefits of physical activity, which is essential for maintaining mobility and cognitive function in Parkinson's disease (40). Moreover, digital health literacy, the ability to access and use digital health resources, has become increasingly important with the advent of telemedicine and online health platforms (39). Patients who are digitally literate can more easily access remote consultations, educational materials, and support groups, which can enhance their overall care experience and outcomes.

However, the readability and accessibility of health information, especially online, can pose significant challenges for patients with limited health literacy. Studies have shown that many online resources about Parkinson's disease are written at a level that is too complex for the average patient to understand, potentially leading to confusion and misinterpretation of critical health information (42). This can be particularly problematic for older adults or those with cognitive impairments, who may already face difficulties in processing new information (41).

To address these issues, healthcare providers can use validated assessment tools, such as the Rapid Estimate of Adult Literacy in Medicine-Short Form (REALM-SF) and the Newest Vital Sign (NVS), to identify patients with low health literacy and tailor their communication strategies accordingly (38). These tools can help providers ensure that the information they provide is comprehensible and actionable, thereby improving patient engagement and adherence to treatment plans (43,44).

Furthermore, promoting patient-centered care, which emphasizes the unique needs and preferences of each individual, is essential for enhancing health literacy and communication in Parkinson's disease management (41). By fostering a collaborative and supportive environment, healthcare providers can empower patients to take a more active role in their care, leading to better health outcomes and an improved quality of life (38-41). Additionally, while health literacy is generally well-preserved in patients with movement disorders, including Parkinson's disease, it can be affected by cognitive function and age, highlighting the need for tailored interventions to support these patients (41).

Conclusion:

The literature highlights the significant impact of both motor and non-motor symptoms of Parkinson's disease (PD) on communication, leading to social isolation and reduced psychological well-being. Communication impairments, including issues with speech, language, and cognitive processing, hinder social engagement. Interventions like AAC devices, patient-centered care, and ICTs can improve communication and empower patients to take an active role in their care. Strong social support systems, including family and community resources, are essential for psychological resilience. Improving health literacy and communication between patients and providers also plays a critical role in effective disease management. A multidisciplinary approach integrating these strategies can greatly improve communication and overall quality of life for PD patients.

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The research adheres to the ethical principles outlined in the Declaration of Helsinki.

Data Availability Statement:

The datasets generated and/or analyzed during the current study are available from the corresponding author on reasonable request.

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