



# Knowledge of Saudi Population about Parkinson Disease

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## Abstract

**Background:** Parkinson Disease is the second most common degenerative neurological disease, with Alzheimer's disease being the first. Considering the increasing prevalence of PD and the need for early detection by increasing community awareness of the symptoms to delay the serious complications and improving quality of life. Due to the lack of researches about community awareness, this study aimed to measure the level of knowledge of Saudi community about the symptoms of Parkinson disease. **Aim:** To measure the level of public knowledge of the symptoms of Parkinson disease in Saudi population. **Methods:** This is a questionnaire-based cross-sectional study. It will be carry out among male and female population older than 18 years in Kingdom of Saudi Arabia, KSA. The Samples selected randomly via electronic questionnaire during the period from April 2018 to September 2018. Descriptive analysis done by using Statistical Package for Social Sciences (SPSS). An exploratory cross-sectional design, using both quantitative and qualitative methods used in this study. The questionnaire divided into two sections, the first section will concern with information of the participants. However, the second section will examine the personal knowledge about symptoms of Parkinson's disease. **Results:** We found that the total awareness was high which indicate that the population had an awareness better than we thought. **Conclusion:** the knowledge of PD motor symptoms among Saudi population found to be higher than expected. More researches targeting other aspects of Parkinson disease and specific subgroups are necessary to improve public awareness and knowledge about PD.

**Keywords:** Parkinson, symptoms, knowledge, awareness, Saudi Arabia

## Introduction

Diagnosis of Parkinson's disease is a life changing.<sup>[1]</sup> PD is a neurodegenerative disorder that affects predominately dopamine-producing neurons in a specific area of the brain.<sup>[2]</sup> Clinically, PD is mainly defined by the presence of the motor symptoms of bradykinesia, rigidity, rest tremor and postural instability, but non-motor symptoms such as depression, dementia and autonomic disturbances are recognised as integral parts of the disease.<sup>[3]</sup> It affects 1-2 per 1000 of the people at anytime. The prevalence is increasing with age and affects 1% of the population above 60

years. Therefore, PD results in an increased socioeconomic burden and impact on the social interactions of those affected.<sup>[4]</sup>

These days, treating PD symptoms help in maintaining the living and the social life of the patients. For that, early diagnosis of the disease facilitates finding a suitable management. For this to happen, its need a background knowledge about PD symptoms.

Improved understanding of these issues will facilitate the development of more educational programs about PD, its symptoms and treatments. Therefore, the purpose of this study is to investigate the awareness and public knowledge about symptoms of PD among male and female population older than 16 years in KSA.

<sup>1</sup>'Parkinson's Disease Prognosis | Parkinson's Disease' <<https://www.michaeljfox.org/understanding-parkinsons/living-with-pd/topic.php?prognosis>>.

<sup>2</sup>'Parkinson's Disease: Hope Through Research | National Institute of Neurological Disorders and Stroke' <[https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Hope-Through-Research/Parkinsons-Disease-Hope-Through-Research#What is Parkinsons](https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Hope-Through-Research/Parkinsons-Disease-Hope-Through-Research#What%20is%20Parkinsons)>.

<sup>3</sup>Ole-Bjørn Tysnes and Anette Storstein, 'Epidemiology of Parkinson's Disease',

<sup>4</sup>Fabiana Magalhães Navarro-Peternella and Sonia Silva Marcon, 'Quality of Life of a Person with Parkinson's Disease and the Relationship between the Time of Evolution and the Severity of the Disease', (2012), 384–91 <<https://doi.org/10.1590/S0104-11692012000200023>>.

## Methodology

This is a questionnaire-based cross-sectional study. Carried out among male and female population older than 16 years all over Saudi Arabia, KSA. The data collected randomly via electronic questionnaire from May to June 2018.

The Knowledge of Parkinson’s disease Questionnaire (KPDQ)

The research group developed the questionnaire. Part 1 of the KPDQ gathered personal information and tests the knowledge of PD of the participant. Part 2 tests recognition of PD symptoms (6 motor), and respondents are instructed to tick a box for “problems experienced by people with PD”.

Descriptive analysis done by using Statistical Package for Social Sciences (SPSS).

**Table 1: Sociodemographic characteristics of participants**

Variables	N (%)
<b>Gender</b>	
Male	88 (22.4)
Female	304 (77.6)
<b>Knowledge about PD score, mean (SD)</b>	4.2 (1.3±)
<b>Age</b>	
16-25	148 (37.8)
26-35	70 (17.9)
36-45	54 (13.8)
45 or above	120 (30.6)
<b>Career</b>	
Non- Employer	226 (57.7)
Employer	157 (40.1)
Privet	9 (2.3)
<b>Education level</b>	
College degree or more	296 (75.5)
Less than College Degree	96 (24.5)
<b>Region</b>	
North	28 (7.1)
East	45 (11.5)
Middle	197 (50.3)
South	50 (12.8)
West	72 (18.4)

## Results

The Awareness and Knowledge about Parkinson’s disease among people in Saudi Arabia. The participants sociodemographic characteristics shown in table 1. Of the 392 responding participants 304 (77.6) were female. The knowledge about PD score, mean 4.2 (1.3±). The participants age were arranged in 4 categories, the main age was between 16-25 years old representing 148 (37.8) and the most of them were non- employers about 226 (57.7). two hundred

**Table 2: N (%)**

Variables	Yes	No	I don’t know
Do patients with Parkinson’s have difficulty swallowing while eating?	149 (38)	71 (18.1)	172 (43.9)
Do they suffer from trembling or shaking hands or one of them?	380 (96.9)	2 (0.5)	10 (2.6)
Does Parkinson's disease slow motion while walking or performing daily activities?	324 (83.4)	17 (4.3)	48 (12.2)
Do they have stiffened muscles in the limbs and neck accompanied by pain?	201 (51.3)	36 (9.2)	155 (39.5)
Are Parkinson's patients suffering from involuntary movements?	325 (82.9)	24 (6.1)	43 (11)
Do you have a slow or difficult to speak?	268 (68.4)	45 (11.5)	79 (20.2)

and ninety six participants (57.7) and 296 (75.5) has collage degree or more. These details was taken from all Saudi Arabia regions and middle region was on the top by 197(50.3) participants. As seen in table 2. 172 (43.9) of participants answered I don't know for if PD patients have swallowing difficulty while eating which is significant , comparing between participants who answered by No 2 (0.5) and participants who answered by I don't know 10 (2.6) for question about Do they suffer from trembling or shaking hands or one of them it is slightly approximate. About 324 (83.4) of participants going to answered Yes for if Does Parkinson's disease slow motion while walking or performing daily activities. About Do they have stiffened muscles in the limbs and neck accompanied by pain question more than half 201 (51.3) answered by Yes.24 (6.1) was select No for if Parkinson's patients suffering from involuntary movements. Finally, almost of participants 268 (68.4) was chose Yes about Do they have a slow or difficult to speak.

## Discussion

This study is the first to examine public awareness and knowledge of PD in Saudi Arabia. There was no Arabic validity questionnaire. So build our questionnaire from previous studies and researches. We aimed in this study to measure the awareness of PD among Saudi population, to find were the gaps and ways to raise them.

The total awareness was mean 4.2±1.3 about 70% and that indicates that the population have a good awareness about PD. On the other hand, in the South Korea<sup>[5]</sup> the total awareness only 10.2% of participants and that shows decreased awareness.

Another study with Asian patients<sup>[6]</sup> found significantly higher knowledge amongst patients in the working age group than the retired age group. It postulated that people of working age have better knowledge, and a better capacity to learn than people who have retired from active work. However, we didn't found any significant relationship between others sociodemographic data and awareness about PD due to the p-value 0.05.

When we asked about the most common symptoms associated with Parkinson's disease, we found that most participants had knowledge about it by chosen “yes”. 96.9% knew the PD patients suffered from tremor. 83.4% awareness about slow motion while walking or performing daily activities. 51.3% knew they have stiffened muscles in the limbs and neck accompanied by pain and 68.4% knew about difficult speak with PDP.

One of the most powers of our study that, it was the first study to examine and measure the awareness in Saudi Arabia in multiple reigns. Unfortunately, we have some limitations in this study, like the small number of sample size, we didn't based our questionnaire on prewise validity questionnaire. We hope that these things will be taken into account in order to avoid them in the future.

<sup>5</sup>Jinyoung Youn and others, ‘Public Awareness and Knowledge about Parkinson’s Disease: A National Population Based Survey in South Korea’, (2016), 117–23 <<https://doi.org/10.1159/000452500>>.

<sup>6</sup>Onanong Jitkrisadukul, Nonglak Boonrod, and Roongroj Bhidayasiri, ‘Knowledge, Attitudes and Perceptions of Parkinson’s Disease: A Cross-Sectional Survey of Asian Patients’, (2017), 69–74 <<https://doi.org/10.1016/j.jns.2016.12.063>>.

## **Conclusion**

Parkinson is one of the diseases that has increasing of prevalence and need for early detection by increasing community awareness of symptoms to delay the serious complication and improving quality of life.

## **Recommendations**

While making this study we encounter very few studies and articles talking about knowledge and attitude regarding description disease of movement disorders in general; therefore, we highly recommend and encourage researches to conduct more studies and researches about awareness and attitude relation to Parkinson disease and movement disorders to be done.

## **Conflict of interests**

The authors declare that there is no conflict of interest regarding the publication of this paper.

## **Acknowledgment**

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