Data Article

Data on pain coping strategies and their association with quality of life in people with Parkinson’s disease: A cross-sectional study

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\textbf{A B S T R A C T}

This article presents data about coping with pain and health-related quality of life from 52 patients with Parkinson’s disease (PD) (without PD dementia). Coping was assessed using Coping Strategy Questionnaire (CSQ), including active/passive and cognitive/behavioral coping strategies and the felt efficacy of the coping strategies used. In addition, common PD specific assessments were recorded. For pain rating the corresponding items from the Short-Form-36 were used. The dataset allows determining factors related pain and coping in PD. The dataset can be utilized by clinicians, academics and pharmacists for further research and reference purposes. The data presented herein is associated with the research article “Pain coping strategies and their association with quality of life in people with Parkinson’s Disease: a Cross-Sectional study” \cite{1} and available on Dryad, Dataset 10.5061/dryad.2280gb5s7.

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Specifications Table

| Subject               | Geriatrics and Gerontology          |
|-----------------------|-------------------------------------|
| Specific subject area | Health Services Research            |
| Type of data          | Table                               |
| How the data were acquired | Survey using the Coping Strategy Questionnaire (CSQ). Data from 52 patients with PD and informed consent were collected (consecutive sampling) spending their time on the neurological ward in the Clinic of Neurology at the Jena University Hospital, Jena, Germany. Statistical analyses were performed using SPSS version 25.0 (IBM, New York, NY, USA) and R version 3.6.2 (R Foundation for Statistical Computing, Vienna, Austria), with a p-value of <0.05 indicating statistical significance. |
| Data format           | Raw Analysed                        |
| Description of data collection | All subjects were treated in the PD multimodal complex therapy. Assessments were collected at the start of the inpatient stay. Patients were included for the following reasons: deep brain stimulation evaluation, increasing fluctuations, increasing off- phases, freezing and gait deterioration. Patients with significant cognitive impairments based on the Montreal Cognitive Assessment (MoCA ≤21) were excluded. |
| Data source location  | Department of Neurology, Jena University Hospital Am Klinikum 1, 07747 Jena, Germany |
| Data accessibility    | Repository name: T. Prell, Pain Coping Strategies and their Association with Quality of Life in People with Parkinson's disease: a Cross-Sectional Study, Dryad, Dataset, (2021). Data identification number: 10.5061/dryad.2280gb5s7 Direct link to the dataset: https://datadryad.org/stash/dataset/doi:10.5061/dryad.2280gb5s7 |
| Related research article | T. Prell, J.D. Liebermann, S. Mendorf, T. Lehmann, H.M. Zipprich, Pain coping strategies and their association with quality of life in people with Parkinson's disease: A cross-sectional study, PLoS One 16(11) (2021) e0257966. [1] |

Value of the Data

- The data reported in this article provide information about coping strategies of patients with PD.
- The data reported in this article can be used to investigate pain management and its influencing factors in people with PD.
- The data reported in this article can be used for general analyses about people with PD, as general and disease-specific data are given.
- The data reported in this article can be used by clinicians and academia for further research as well as reference.

1. Data Description

The data article reports demographical and clinical data as well as data about coping and health-related quality of life (Table 1). Data from 52 individuals have been provided (age 74.4, SD 6.6, 38.5% female). About 65% (n = 34) were in Hoehn & Yahr stage 3, which was followed by stage 2 (n = 8) and stage 4 (n = 8), and two patients showed stage 1. Pain was analyzed using the related SF-36 items 21 and 22. Two/fifth were in no (n = 5), very mild (n = 5), or mild (n = 10) physical pain, and four/fifth suffered from moderate (n = 14), severe (n = 14), or very severe (n = 3) pain in the past month. The impact of pain on normal work was described by 51% as not at all (n = 6), a little (n = 10), and moderately (n = 10). Of note, conversely, 49% described a strong (n = 19) and extreme (n = 6) impact on work (SF-36 item 22). The items and scales of the CSQ are presented in the data set. Overall, 33 (64%) utilized active coping strategies and 19 (36.5%) utilized passive coping strategies based on the combination of the scales on CSQ factors (n = 14, 26.9%). Descriptive statistics of the sample are presented in Tables 2 and 3.
Table 1
Variables description.

| Variable                          | Type/ unit      | Description                          | Explanation                                                                 |
|-----------------------------------|-----------------|--------------------------------------|-----------------------------------------------------------------------------|
| Age                               | Numerical years | Individual age, grouped              |                                                                             |
| Sex                               | Nominal gender  | Housing situation                   |                                                                             |
| Disease duration                  | Numerical years | Disease duration, grouped            |                                                                             |
| HY                                | Ordinal         | Movement Disorder                    | Society-sponsored revision of the Unified Parkinson’s Disease Rating Scale III |
| MDS-UPDRS_subscore_III            | Numerical       | Beck Depression Inventory II, grouped | Coping (Coping Strategy Questionnaire (CSQ)):                                |
| NMSQ                              | Numerical       | revised nonmotor symptoms questionnaire, grouped |
| MOCA                              | Numerical       | Montreal Cognitive Assessment, grouped |
| BDI_II                            | Numerical       | Physical functioning                 |                                                                             |
| SF36_rphysf_c                     | Numerical       | Social functioning                   |                                                                             |
| SF36_rolref_c                     | Numerical       | Role functioning/physical            |                                                                             |
| SF36_rolrlee_c                    | Numerical       | Role functioning/emotional           |                                                                             |
| SF36_rment_c                      | Numerical       | Emotional well-being                 |                                                                             |
| SF36_rvit_c                       | Numerical       | Energy/fatigue                       |                                                                             |
| SF36_rpain_c                      | Numerical       | Pain                                 |                                                                             |
| SF36_rgenh_c                      | Numerical       | General Health                       |                                                                             |
| SF36_rchange_c                    | Numerical       | Health change                        |                                                                             |
| SF36_item_pain                    | Ordinal         | How much bodily pain have you had during the past 4 weeks? | 1 none; 2 very mild; 3 mild; 4 moderate; 5 severe |
| SF36_item_painADL                 | Ordinal         | How much did pain interfere with your normal work? | 1 not at all; 2 a little bit; 3 moderately; 4 quite a bit; 5 extremely |

Table 2
Descriptive statistics – nominal, categorical and ordinal variables.

| Sex (n,%)       | Female | 20 | 38.5 |
|-----------------|--------|----|------|
|                 | Male   | 32 | 61.5 |
| Housing situation | Alone | 15 | 28.8 |
|                 | Not alone | 37 | 71.2 |
| Hoehn and Yahr stage (median, IQR) | 2.93 | 0.80 |
| SF36 item: How much bodily pain have you had during the past 4 weeks? (median, IQR) | 4 | 2 |
| SF36 item: How much did pain interfere with your normal work? (median, IQR) | 3 | 2 |
Table 3
Descriptive statistics – numerical variables.

|                          | Mean | SD  |
|--------------------------|------|-----|
| Age (years)              | 74.38| 6.60|
| Disease duration (years) | 8.86 | 5.21|
| MDS-UPDRS III            | 32.45| 14.85|
| NMS-Quest                | 11.18| 4.73|
| Montreal Cognitive Assessment | 25.15| 3.09|
| Beck Depression Inventory II | 11.53| 6.28|

**Coping (Coping Strategy Questionnaire (CSQ))**:  
| Coping          | Mean | SD  |
|-----------------|------|-----|
| Diverting Attention | 40.43| 19  |
| Reinterpreting Pain Sensations | 23.08| 16.49|
| Coping Self-Statements | 52.62| 17.0|
| Ignoring Pain Sensations | 41.5 | 22.11|
| Praying or Hoping | 30.6 | 16.53|
| Catastrophizing   | 34.89| 18.3|
| Increasing Activity Level | 43.11| 19.38|
| Increasing Activity Level | 46.64| 15.86|
| Control over Pain | 42.95| 27.08|
| Ability to Decrease Pain | 41.34| 26.09|

**Short Form 36 (SF-36)**:  
| Function         | Mean | SD  |
|------------------|------|-----|
| Physicalfunctioning | 39.41| 25.01|
| Socialfunctioning | 56.86| 27.08|
| Role functioning/physical | 18.0 | 29.89|
| Role functioning/emotional | 47.06| 44.81|
| Emotional well-being | 60.94| 15.79|
| Energy/fatigue    | 44.71| 15.34|
| Pain              | 45.74| 25.7|
| General Health    | 39.22| 14.84|
| Health change     | 30.88| 23.23|

2. Experimental Design, Materials and Methods

2.1. Experimental design

In this observational study, people with PD were consecutively recruited from the Department of Neurology at the Jena University Hospital between May 2019 to July 2019. This study was approved by the local ethics committee of the Jena University Hospital (4572-10/15). The participants gave their written agreement in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki). All patients arrived at the clinic as scheduled and were enrolled in a Parkinson’s-specific complex program. As part of this, multimodal therapy by specialized therapists and medication optimization took place (Multimodal Complex Treatment for PD) [2]. Assessments were collected at the start of the inpatient stay. Patients were included for the following reasons: deep brain stimulation evaluation, increasing fluctuations, increasing off-phases, freezing and gait deterioration. Patients with significant cognitive impairments based on the Montreal Cognitive Assessment (MoCA ≤21) were excluded [3].

2.2. Materials

We collected demographic and PD-specific data: Age, gender and living situation, Movement Disorder Society-sponsored revision of the Unified Parkinson's Disease Rating Scale III (MDS-UPDRS III) [4], the revised Nonmotor Symptoms Questionnaire (NMS-Quest) [5], and the Hoehn and Yahr staging; MoCA was utilized to assess cognitive ability. The BDI was used to assess depression (BDI-II). The Short Form 36 (SF-36) of the Medical Outcomes Study (MOS) was utilized to assess health-related quality of life [6,7]. The calculation of the SF-36 subscales was made ac-
cording to the standardized algorithm based on instructions from RAND Health Care (www.rand.org/health-care/surveys_tools/mos/36-item-short-form/scoring.html). Subsequently, the items of every scale were added and newly scaled in a standard interval from 0 to 100. A value of 100 indicates the highest level of health.

The corresponding SF-36 subscale was utilized to assess pain: Item 21 (How severe was your physical pain in the past four weeks?) and Item 22 (How much did pain interfere with your normal work (including work outside the home and housework) in the past four weeks?); lower scores indicate more severe pain.

Pain coping was rated with the Coping Strategy Questionnaire (CSQ) (https://igptr.ch/wp-content/uploads/2019/09/CSQ-D.pdf). It is a commonly used, internationally validated questionnaire on pain coping strategies measuring not only active/passive but also cognitive/behavioral coping mechanisms, as well as the perceived effectiveness of the coping strategies used [8]. The CSQ-D includes 50 items of pain coping used by the patient respondent. Patients are asked to assess what they do when they are feeling pain and to select the most appropriate response. For this reason, the CSQ scales were divided into CSQ factors: active and passive pain coping strategies, and self-efficacy [9].

Ethics Statements

This study was approved by the local ethics committee of the Jena University Hospital (4572-10/15). The participants gave their written agreement in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki).

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability

Prell, Tino (2021), Pain Coping Strategies and their Association with Quality of Life in People with Parkinson’s disease: a Cross-Sectional Study, Dryad, Dataset, 10.5061/dryad.2280gb5 (Original data) (Dryad).

CRediT Author Statement

Tino Prell: Conceptualization, Formal analysis, Methodology, Resources, Writing – original draft; Jenny Doris Liebermann: Data curation; Sarah Mendorf: Writing – review & editing; Hannah M. Zipprich: Formal analysis, Writing – review & editing. All authors have read and approved the manuscript.
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Supplementary Materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.dib.2022.108288.

References

[1] T. Prell, J.D. Lieermann, S. Mendorf, T. Lehmann, H.M. Zipprich, Pain coping strategies and their association with quality of life in people with Parkinson’s disease–A cross-sectional study, PloS One 16 (11) (2021) e0257966, doi: 10.1371/journal.pone.0257966.

[2] D. Richter, D. Bartig, S. Muhlack, E. Hartelt, R. Scherbaum, A.H. Katsanos, T. Müller, W. Jost, G. Ebersbach, R. Gold, C. Kroglas, L. Tönges, Dynamics of Parkinson’s disease multimodal complex treatment in Germany from 2010–2016–Patient characteristics, access to treatment, and formation of regional centers, Cells 8 (2) (2019), doi: 10.3390/cells8020151.

[3] Z.S. Nasreddine, N.A. Phillips, V. Bédirian, S. Charbonneau, V. Whitehead, I. Collin, J.L. Cummings, H. Chertkow, The Montreal Cognitive Assessment, MoCA–A brief screening tool for mild cognitive impairment, J. Am. Geriatr. Soc. 53 (4) (2005) 695–699, doi:10.1111/j.1532-5415.2005.53221.x.

[4] C. Goetz, S. Fahn, P. Martinez-Martin, W. Poewe, C. Sampaio, G. Stebbins, M. Stern, B. Tilley, R. Dodel, B. Dubois, R. Holloway, J. Jankovic, J. Kulisevsky, A. Lang, A. Lees, S. Leurgans, P. LeWitt, D. Nyenhuis, C. Olanow, O. Rascol, A. Schrag, J. Teresi, J. Van Hilten, N. LaPelle, Movement Disorder Society-sponsored revision of the Unified Parkinson’s Disease Rating Scale (MDS-UPDRS)–Process, format, and clinimetric testing plan, Mov. Disord. 22 (1) (2007) 41–47.

[5] S.R. Romenets, C. Wolfson, C. Galatas, A. Pelletier, R. Altman, L. Wadup, R.B. Postuma, Validation of the non-motor symptoms questionnaire (NMS-Quest), Parkinsonism Relat. Disord. 18 (1) (2012) 54–58, doi:10.1016/j.parkreldis.2011.08.013.

[6] J.E. Ware Jr., C.D. Sherbourne, The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection, Med. Care 30 (6) (1992) 473–483.

[7] C.A. McHorney, J.E. Ware Jr., J.F. Lu, C.D. Sherbourne, The MOS 36-item Short-Form Health Survey (SF-36)–III. Tests of data quality, scaling assumptions, and reliability across diverse patient groups, Med. Care 32 (1) (1994) 40–66, doi:10.1097/00005650-199401000-00004.

[8] M.L. Verra, F. Angst, S. Lehmann, A. Aeschlimann, Translation, cross-cultural adaptation, reliability, and validity of the German version of the Coping Strategies Questionnaire (CSQ-D), J. Pain 7 (5) (2006) 327–336, doi: 10.1016/j.jpain.2005.12.005.

[9] G. Tan, M.P. Jensen, S. Robinson-Whelen, J.L. Thornby, T.N. Monga, Coping with chronic pain–A comparison of two measures, Pain 90 (1–2) (2001) 127–133, doi:10.1016/s0304-3959(00)00395-x.