Data and code for: Better self-care through co-care? A latent profile analysis of primary care patients' experiences of e-health-supported chronic care management

SND-ID: 2022-101-1. **Version**: 1. **DOI**: https://doi.org/10.48723/kzja-5k21

Download data

factorscores_docca.csv *(60.11 KB)*

latent-profile-analysis-results_docca.csv *(37.98 KB)*

Associated documentation

R-script_Step-0_Factor-scores.R *(3.01 KB)*

R-script_Step-1_Latent-profile-analysis.R *(12.26 KB)*

R-script_Step-2_Non-parametric-tests.R *(4.63 KB)*

R-script_Step-3_Class-transitions.R *(3.4 KB)*

variable-definitions_swe-eng.xlsx *(18.85 KB)*

Download all files

2022-101-1-1.zip *(~140.23 KB)*

Citation

Wannheden, C., Roczniewska, M., Hasson, H., Karlgren, K., & von Thiele Schwarz, U. (2022) Data and code for: Better self-care through co-care? A latent profile analysis of primary care patients' experiences of e-health-supported chronic care management (Version 1) [Data set]. Karolinska Institutet. Available at: https://doi.org/10.48723/kzja-5k21

Alternative title

Latent profile analysis of co-care experiences

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Description

This data description contains code (written in the R programming language), as well as processed data and results presented in a research article (see references). No raw data are provided and the data that are made available cannot be linked to study participants. The sample consists of 180 of 308 eligible participants (adult primary care patients in Sweden, living with chronic illness) who responded to a Swedish web-based questionnaire at two time points. Using a confirmatory factor analysis, we calculated latent factor scores for 9 constructs, based on 34 questionnaire items. In this dataset, we share the latent factor scores and the latent profile analysis results. Although raw data are not shared, we provide the questionnaire item, including response scales. The code that was used to produce the latent factor scores and latent profile analysis results is also provided.

The study was performed as part of a research project exploring how the use of eHealth services in chronic care influence interaction and collaboration between patients and healthcare. The purpose of the study was to identify subgroups of primary care patients who are similar with respect to their experiences of co-care, as measured by the DoCCA scale (von Thiele Schwarz, 2021). Baseline data were collected after patients had been introduced to an eHealth service that aimed to support them in their self-care and digital communication with healthcare; follow-up data were collected 7 months later. All patients were treated at the same primary care center, located in the Stockholm Region in Sweden.

Cited reference: von Thiele Schwarz U, Roczniewska M, Pukk Härenstam K, Karlgren K, Hasson H, Menczel S, Wannheden C. The work of having a chronic condition: Development and psychometric evaluation of the Distribution of Co-Care Activities (DoCCA) Scale. BMC Health Services Research (2021) 21:480. doi: 10.1186/s12913-021-06455-8

The DATASET consists of two files: factorscores_docca.csv and latent-profile-analysis-results_docca.csv.

* factorscores_docca.csv: This file contains 18 variables (columns) and 180 cases (rows). The variables represent latent factors (measured at two time points, T1 and T2) and the values are latent factor scores. The questionnaire data that were used to produce the latent factor scores consist of 20 items that measure experiences of collaboration with healthcare, based on the DoCCA scale. These items were included in the latent profile analysis. Additionally, latent factor scores reflecting perceived self-efficacy in self-care (6 items), satisfaction with healthcare (2 items), self-rated health (2 items), and perceived impact of e-health (4 items) were calculated. These items were used to make comparisons between profiles resulting from the latent profile analysis. Variable definitions are provided in a separate file (see below).

* latent-profile-analysis-results_docca.csv: This file contains 14 variables (columns) and 180 cases (rows). The variables represent profile classifications (numbers and labels) and posterior classification probabilities for each of the identified profiles, 4 profiles at T1 and 5 profiles at T2. Transition probabilities (from T1 to T2 profiles) were not calculated due to lacking configural similarity of profiles at T1 and T2; hence no transition probabilities are provided.

The ASSOCIATED DOCUMENTATION consists of one file with variable definitions in English and Swedish, and four script files (written in the R programming language):

* variable-definitions_swe-eng.xlsx: This file consists of four sheets. Sheet 1 (scale-items_original_swedish) specifies the questionnaire items (in Swedish) that were used to calculate the

latent factor scores; response scales are included. Sheet 2 (scale-items_translated_english) provides an English translation of the questionnaire items and response scales provided in Sheet 1. Sheet 3 (factorscores_docca) defines the variables in the factorscores_docca.csv dataset. Sheet 4 (latent-profile-analysis-results) defines the variables in the latent-profile-analysis-results_docca.csv dataset.

* R-script_Step-0_Factor-scores.R: R script file with the code that was used to calculate the latent factor scores. This script can only be run with access to the raw data file which is not publicly shared due to ethical constraints. Hence, the purpose of the script file is code transparency. Also, the script shows the model specification that was used in the confirmatory factor analysis (CFA). Missingness in data was accounted for by using Full Information Maximum Likelihood (FIML).

* R-script_Step-1_Latent-profile-analysis.R: R script file with the code that was used to run the latent profile analyses at T1 and T2 and produce profile plots. This code can be run with the provided dataset factorscores_docca.csv. Note that the script generates the results that are provided in the latent-profile-analysis-results_docca.csv dataset.

* R-script_Step-2_Non-parametric-tests.R: R script file with the code that was used to run non-parametric tests for comparing exogenous variables between profiles at T1 and T2. This script uses the following datasets: factorscores_docca.csv and latent-profile-analysis-results_docca.csv.

* R-script_Step-3_Class-transitions.R: R script file with the code that was used to create a sankey diagram for illustrating class transitions. This script uses the following dataset: latent-profile-analysis-results_docca.csv.

Software requirements: To run the code, the R software environment and R packages specified in the script files need to be installed (open source). The scripts were produced in R version 4.2.1.

Data contains personal data
No

Language
English
Swedish

Unit of analysis
Individual/Patient

Population
Primary care patients with any of the following diagnoses: hypertension, heart failure, mental illness

Time Method
Longitudinal: Panel: Interval

Study design
Observational study

Description of study design
Two-wave longitudinal questionnaire study set in a primary health care center in Sweden.

Sampling procedure

Participants were purposefully sampled to participate in the pilot if they fulfilled the following criteria: diagnosed with hypertension, chronic heart failure, or mental health conditions (e.g., stress-related ill-health, insomnia, anxiety, and depressive disorders); able to speak Swedish; age > 18 years. The participants were recruited by the primary care center and all who participated in the pilot were invited to respond to the questionnaires.

Time period(s) investigated

2018-10 – 2019-06

Variables

31

Number of individuals/objects

180

Response rate/participation rate

55%

A total of 308 participants were invited. Response rate at T1: 55%; Response rate at T2: 41%.

Data format / data structure

Numeric

Geographic spread

Geographic location: Stockholm County

Geographic description: The study population consisted of patients from one primary care center in Stockholm Region.

Responsible department/unit

Department of Learning, Informatics, Management and Ethics

Funding

- Funding agency: The Kamprad Family Foundation for Entrepreneurship, Research & Charity
- Funding agency's reference number: 20170012
- Project name on the application: Co-care: Hur kan eHälsa bidra till ökad effektivitet genom förändrad instruktion mellan vårdgivare och patienter?

Ethics Review

Swedish Ethical Review Authority - Ref. 2018/625-31/5 and 2018/1717-32

Research area

Health care service and management, health policy and services and health economy (Standard för svensk indelning av forskningsämnen 2011)

Other health sciences (Standard för svensk indelning av forskningsämnen 2011)

General health and well-being (CESSDA Topic Classification)

Health care services and policies (CESSDA Topic Classification)

Keywords

[Latent profile analysis](), [Chronic care](), [Co-care](), [Patient experiences]()

Publications

Carolina Wannheden, Marta A. Roczniewska, Henna Hasson, Klas Karlgren, and Ulrica Von Thiele Schwarz, 2022. Better self-care through co-care? A latent profile analysis of primary care patients' experiences of e-health–supported chronic care management, Front. Public Health, Sec. Public Health Education and Promotion, accepted. doi: 10.3389/fpubh.2022.960383
DOI: [https://doi.org/10.3389/fpubh.2022.960383]()

von Thiele Schwarz, U., Roczniewska, M., Pukk Härenstam, K., Karlgren, K., Hasson, H., Menczel, S., & Wannheden, C. (2021). The work of having a chronic condition : development and psychometric evaluationof the distribution of co-care activities(DoCCA) scale. In BMC Health Services Research (Vol. 21, Issue 480). [https://doi.org/10.1186/s12913-021-06455-8]()
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SwePub: [oai:DiVA.org:mdh-56003]()

Accessibility level

Access to data through SND
Data are freely accessible

Use of data

[Things to consider when using data shared through SND]()

Versions

Version 1. 2022-09-08

Contacts for questions about the data

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Download metadata

[DataCite]()

[DDI 2.5]()

[DDI 3.3]()

[DCAT-AP-SE 2.0]()

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[File overview (CSV)]()

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