

Supplementary Material

Survey Measures and Response Options

This supplementary material provides a comprehensive overview of the survey measures and variables used in the study. It includes detailed descriptions of the questionnaires, response options, and scoring systems for the different assessed domains such as back pain assessment, medication-related perceptions, pain self-efficacy, motivation, and perceived care. The tables systematically present the structure of the questionnaires and their respective items, enabling a clear understanding of the data encoding for subsequent analysis.

Table 1. Core Outcome Measures Index (COMI) Components

Item & Question	Answer Options	Scoring
Back Pain Intensity		0-10
"How severe was your back pain in the last week?"	0 (No pain) to 10 (Worst pain)	
Leg Pain Intensity		0-10
"How severe was your leg/buttock pain in the last week?"	0 (No pain) to 10 (Worst pain)	
Function		0-10
"How much did your back problem interfere with normal work?"	Not at all	0
	A little bit	2.5
	Moderately	5.0
	Quite a bit	7.5
	Extremely	10.0
Symptom-Specific Well-being		0-10
"How would you feel spending the rest of your life with current symptoms?"	Very satisfied	0
	Somewhat satisfied	2.5
	Neither satisfied nor dissatisfied	5.0
	Somewhat dissatisfied	7.5
	Very dissatisfied	10.0
Quality of Life		0-10
"How would you rate your quality of life in the past week?"	Very good	0
	Good	2.5
	Moderate	5.0
	Bad	7.5
	Very bad	10.0
Social Disability		0-10
"In the past 4 weeks, how many days did you cut down on activities?"	None	0
	1-7 days	2.5
	8-14 days	5.0
	15-21 days	7.5
	>21 days	10.0
Work Disability		0-10
"In the past 4 weeks, how many days did back pain keep you from work?"	None	0
	1-7 days	2.5
	8-14 days	5.0
	15-21 days	7.5
	>21 days	10.0

Table 2. Back Pain History and Treatment Variables

Item & Question	Answer Options	Type
Duration of Back Complaints		Ordinal
"Since how many weeks are the complaints (again) so strong that you need treatment?"	Less than 4 weeks 4-8 weeks 8-12 weeks More than 12 weeks	1 2 3 4
Previous Infiltration		Binary
"Have you had previous infiltrations?"	Yes No	
Time Since Last Infiltration		Ordinal
"When was your last infiltration?"	Never Less than 1 year 1-2 years More than 2 years	
Location of Last Infiltration		Nominal
"Who performed your last infiltration?"	Never Schulthess Clinic and same doctor Schulthess Clinic from different doctor Different clinic/institute	
Previous Treatment Success		Binary
"Did the previous infiltration help?"	Yes No Never (if no previous infiltration)	

Principal Features based on PCA**Principal Component Analysis of Features based on PCA**

Principal Component Analysis revealed that 90% of the variance was in 23 components out of the total 52 encoded features. The ranking of the most informative features in terms of variance identified prior treatment experience and professional status as the most informative features (see supplementary material). Top features were previous infiltration improvement and professional occupation - housework, followed by doctor-recommended infiltration and care understanding. Clinical variables, such as baseline back pain, demonstrated moderate contributions, whereas psychosocial factors, including pain self-efficacy, had comparatively lower influence. Table 6 presents the features ordered by their summed loading values across principal components, with higher values indicating greater contribution to data variance.

Table 3. Medication-Related Variables

Item & Question	Answer Options	Scoring
Susceptibility to Medications	Likert Scale	Ordinal
"I am very susceptible to medications"	Strongly disagree Disagree Neutral Agree Strongly agree	1 2 3 4 5
General Reaction to Medications	Likert Scale	Ordinal
"I generally have strong reactions to medications."	Strongly disagree Disagree Neutral Agree Strongly agree	1 2 3 4 5
Comparative Reaction Strength	Likert Scale	Ordinal
"I generally react more strongly to medications than most people."	Strongly disagree Disagree Neutral Agree Strongly agree	1 2 3 4 5
Experience of Side Effects	Likert Scale	Ordinal
"I have experienced unpleasant side effects from medications in the past"	Strongly disagree Disagree Neutral Agree Strongly agree	1 2 3 4 5
Dose Sensitivity	Likert Scale	Ordinal
"Even a very small dose of medication can upset my body"	Strongly disagree Disagree Neutral Agree Strongly agree	1 2 3 4 5

Table 4. Pain Self-Efficacy Questionnaire (PSEQ)

Item & Question	Answer Options	Scoring
Enjoyment Despite Pain		1-6
"I can enjoy things despite the pain"	1 = Completely convinced to 6 = Not at all convinced	
Household Activities		1-6
"I can do most household chores"	1 = Completely convinced to 6 = Not at all convinced	
Social Activities		1-6
"I can meet friends/family as often as before"	1 = Completely convinced to 6 = Not at all convinced	
Pain Coping		1-6
"I can cope with pain in most situations"	1 = Completely convinced to 6 = Not at all convinced	
Work Capability		1-6
"I can do some form of work despite pain"	1 = Completely convinced to 6 = Not at all convinced	
Leisure Activities		1-6
"I can still do many enjoyable activities"	1 = Completely convinced to 6 = Not at all convinced	
Medication Independence		1-6
"I can cope with pain without medication"	1 = Completely convinced to 6 = Not at all convinced	
Life Goals		1-6
"I can still achieve most life goals despite pain"	1 = Completely convinced to 6 = Not at all convinced	
Normal Life		1-6
"I can live a normal life despite the pain"	1 = Completely convinced to 6 = Not at all convinced	
Activity Progression		1-6
"I can gradually become more active despite pain"	1 = Completely convinced to 6 = Not at all convinced	

Table 5. Motivation Sources and the care perception in Medical Decision-Making

Item & Question	Answer Options	Type
Motivation Sources	Checkbox	Categorical
	Motivation from friends	0
	Motivation from family	1
	Motivation from the infiltration doctor	2
	Motivation from the house doctor	3
	Motivation from the internet	4
	Motivation from own experience	5
Importance of Others' Opinions	Likert Scale	Ordinal
"How important is the opinion of others in your decision to get an infiltration?"	Not at all important	1
	Slightly important	2
	Moderately important	3
	Very important	4
	Extremely important	5
Comfort with Care Received	Likert Scale	Ordinal
"How comfortable do you feel with the care you received?"	Completely true	1
	Largely true	2
	Partially true	3
	Hardly true	4
	Not true at all	5
	Not assessable	6
Understood by Healthcare Provider	Likert Scale	Ordinal
"Do you feel understood by your healthcare provider?"	Completely true	1
	Largely true	2
	Partially true	3
	Hardly true	4
	Not true at all	5
	Not assessable	6
Overall Experience with Care	Likert Scale	Ordinal
"How positive is your overall experience with the care you received?"	Completely true	1
	Largely true	2
	Partially true	3
	Hardly true	4
	Not true at all	5
	Not assessable	6

Table 6. Feature Ranking Based on PCA Contribution

Rank	Feature	Summed loading	Rank	Feature	Value
1	Improved last infiltration (yes)	1.692	20	Improved last infiltration (never)	1.258
2	Profession (housework)	1.565	21	Motivation (friend)	1.256
3	Motivation (doctor)	1.532	22	Duration of back complaints	1.189
4	Last infiltration (different clinic)	1.519	23	Medicine reaction (than others)	1.181
5	Care understood	1.480	24	Previous infiltration	1.177
6	Care comfortability	1.441	25	Education	1.162
7	Profession (other)	1.401	26	Work disability	1.156
8	Medicine strong reaction	1.401	27	Medicine susceptibility	1.146
9	Motivation (own experience)	1.400	28	Profession (self-employed)	1.134
10	Work time	1.395	29	Age	1.132
11	Back pain	1.367	30	Pain self-efficacy (enjoy)	1.119
12	Profession (retired)	1.360	31	Time since last infiltration	1.057
13	Last infiltration (same clinic)	1.351	32	Function	1.052
14	Improved last infiltration (no)	1.340	33	Pain self-efficacy (no medicine)	1.026
15	Motivation (house doctor)	1.325	34	Motivation (family)	1.019
16	Last infiltration (different doctor)	1.311	35	Medicine weekly dose	1.012
17	Sex	1.297	36	Leg pain	0.978
18	Motivation (internet)	1.279	37	Pain self-efficacy (company)	0.754
19	Profession (incapacity)	1.263			