

Appendix 2: Development and validation of Health-seeking behavior scale

1. Literature review and item generation

Based on a literature review using Google Scholar, PubMed, JSTORE and BMC we identified the following number local studies, and made a list of following items from those studies.

Selection criterion:

1. We included only studies conducted in hospitals to measure health-seeking behavior and excluded community-based studies or those related to primary healthcare services.
2. In addition, we only included studies related to health-seeking behavior for chronic liver disease or general disease and excluded studies targeting specific population health groups such as health-seeking for pediatric care, maternal health, cancer care etc.
3. We included studies investigating health-seeking behaviors in Pakistan, including those that discussed the concept and did not necessarily propose or validate a scale.

We identified 11 items, as listed in Appendix A.

2. Content validation

Focus group discussions (FGDs) with Gastroenterologists, Hepatologists, and Psychologists working at Pakistan Kidney and Liver Institute and Research Centre (PKLI&RC) was held to review the items. All 11 items were confirmed, with no suggestions for changes, and only minor linguistic corrections.

3. Further content validation

Five patients, who were not part of the final study were consulted in an FGD regarding the 11 item. No changes were suggested by them and they all confirmed they understood the questions, translated in Urdu.

4. Construct validation of health-seeking behavior

Goodness-of-fit was assessed using the Tucker–Lewis Index (TLI) and the root-mean square error of approximation (RMSEA). The results indicated a good fit= $TLI > 0.90$, $RMSEA < 0.06$. Exploratory factor analysis (EFA) was used to show validity of the scale, using SPSS 25.0. The EFA was performed using the maximum likelihood factor extraction method with the Oblimin rotation. To check whether the size of the sample was appropriate, the KaiserMeier-Olkin (KMO) and Bartlett's test of Sphericity were used. The results confirmed that the sample size was suitable for further analysis ($KMO = 0.90$ and $\chi^2 = 7350.15$, $p = 0.000$, respectively). All items had correlation coefficients >0.4 and individual KMO <0.4 . Factorial analysis identified four factors explaining 54.7% of the variance. The communalities are listed in Table1 below and the scree plot in Figure 1.

Table 1: Communalities

	Initial	Extraction
Doyoubelievefollowingthephysiciansadviceisthebestoptionforyou	1.000	.797
seekingadviceforrecoveryfrompeoplewithsimilarillnesses	1.000	.811
seekingadviceandhelpforrecoveryfromrelativesfriendsandmedia	1.000	.843
seekingadviceforrecoveryfromalternativeprovidersorhealers	1.000	.736
committedtoreturningforyourscheduledphysicianvisits	1.000	.726
gettingyourregularphysicianrecommendedtestsandscans	1.000	.791
committedtogettingtherecommendedsurgeryornextstepofcareplan	1.000	.770
committedtoconsulttheothercareprovidersrecommendedbyconsultant	1.000	.620
satisfiedwithyourconsultantslevelofcommunication	1.000	.750
physicianorconsultanttreatsyouwithrespect	1.000	.728
consultantgivesenoughtimetotoexplainconditionandexploreooptions	1.000	.708

Extraction Method: Principal Component Analysis.

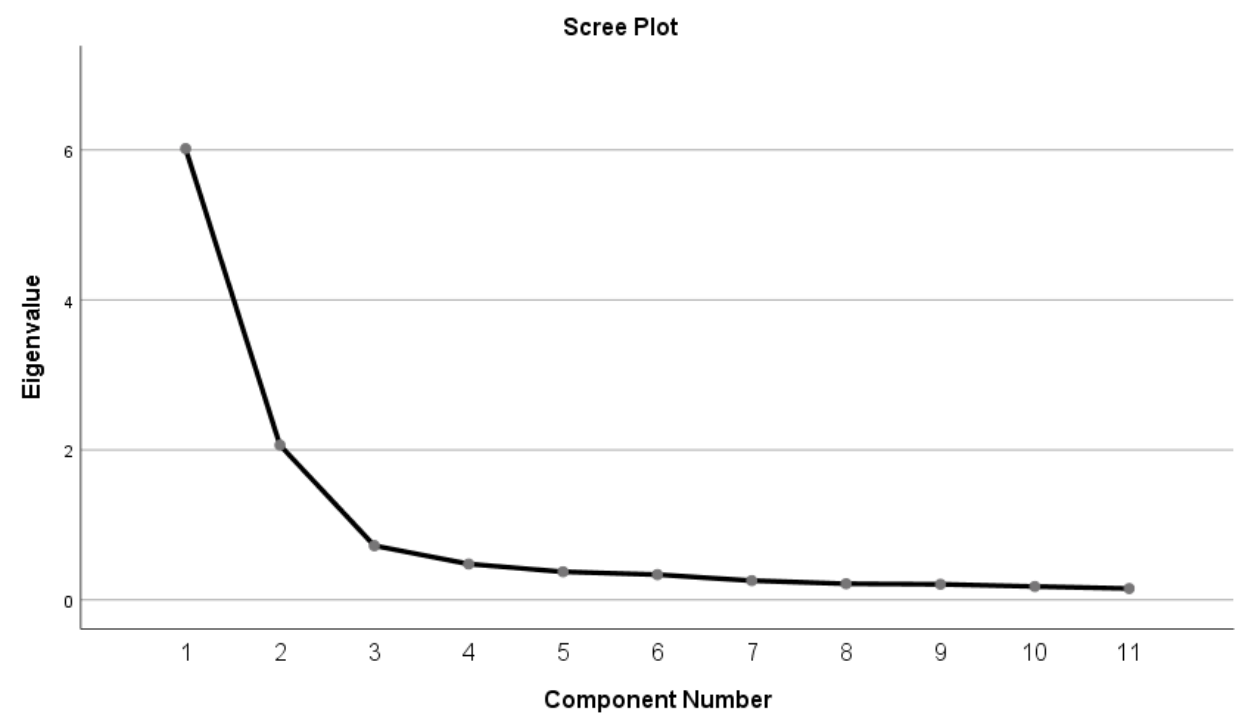


Figure 1: Scree Plot

5. Correlation analysis

The independent study domains were correlated with independent study domain (health-seeking behavior), and the results were found to be satisfactory (Table 2).

Table 2: Correlation of study variables

	Health-seeking behavior (p value)
Economic stability	0.261 (0.000)
Health literacy	0.211 (0.001)
Social support	0.269 (0.002)
Experiencing grief	-0.335 (0.02)
Mental health	-0.225 (0.000)
Healthcare service quality	0.208 (0.000)
Coping strategies	0.334 (0.05)

6. Reliability analysis of study scales

Table 3: Reliability for study scales

Scale	A	Items
Economic stability	0.748	11
Health literacy	0.789	15
Social support	0.846	8
Experiencing grief	0.763	5
Mental health	0.948	31
Healthcare service quality	0.977	20
Coping strategies	0.869	14
Health-seeking behavior	0.897	11

7. Sociodemographic characteristics of study respondents

Table 4: Descriptive statistics of sociodemographic characteristics (n=850)

Variables	n (%)
Age (in years)	
18–29	62 (7.3%)
30–39	166 (19.5%)
40–49	241 (28.4%)
50–59	214 (25.2%)
60 and above	167 (19.6%)
Gender	
Female	422 (49.6%)
Male	428 (50.4%)
Marital status	
Married	709 (83.4%)
Unmarried	81 (9.5%)
Widowed, divorced, separated	60 (7.1%)
Literacy	
Illiterate	315 (37.1%)

Primary / secondary schooling	410 (48.2%)
Graduate	95 (11.2%)
Post-graduate	30 (3.5%)
Regional belonging	
Rural	396 (46.6%)
Urban	454 (53.4%)
Province	
Punjab	781 (91.9%)
Other*	69 (8.1%)
Religious belonging	
Muslim	834 (98.1%)
Other**	16 (1.9%)
Employment status	
Employed	445 (53.6%)
Unemployed	394 (46.4%)
Nature of employment	
Government employee	70 (15.7%)
Private employee	55 (12.4%)
Own business / self-employed	103 (23.1%)
Unskilled worker	26 (5.8%)
Labourer	191 (42.9%)
Monthly household income	
PKR 5,000–24,999/ USD 17.92- 89.59	227 (26.7%)
PKR 25,000–49,999/ USD 89.60-179.19	340 (40.0%)
PKR 50,000–74,999/ USD 179.20-268.79	145 (17.1%)
PKR 75,000–99,999/ USD 268.80-358.39	83 (9.8%)
PKR 100,000/ USD 358.40 and above	55 (6.5%)
Total number of family members living in house	
2–4	214 (25.2%)
5–7	560 (65.9%)
8 or more	76 (8.9%)
Family structure	
Nuclear	439 (51.6%)
Joint	411 (48.4%)
Head of household	
Self	342 (40.2%)
Father / father-in-law / grandfather	257 (30.2%)
Husband	251 (29.5%)
House ownership	
Own	567 (66.7%)
Rented	237 (27.9%)
Living with someone	46 (5.4%)
Number of children	
None	43 (5.1%)
1–2	265 (31.2%)
3–4	363 (42.7%)
5 or more	179 (21.1%)
Number of aging dependents	
None	248 (29.2%)
1–2	444 (52.2%)
3–4	96 (11.3%)
5 or more	62 (7.3%)
Notes:	
* Respondents from other provinces included Sindh =36 (4.2%); KPK = 14 (1.6%); Balochistan = 11 (1.3%); Kashmir = 8 (0.9%)	
** Respondents belonging to other religious groups included Christians = 8 (0.9%); Hindu =1 (0.1%); Sikh = 3 (0.4%); and Ahmadi = 4 (0.5%)	