

Scale for Positive Aspects of Caregiving Experience: Development, Reliability, and Factor Structure

正向照顾经验的估量表：发展、可靠性和因子结构

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Abstract

Objective: To develop an instrument (Scale for Positive Aspects of Caregiving Experience [SPACE]) that evaluates positive caregiving experience and assess its psychometric properties.

Methods: Available scales which assess some aspects of positive caregiving experience were reviewed and a 50-item questionnaire with a 5-point rating was constructed. In all, 203 primary caregivers of patients with severe mental disorders were asked to complete the questionnaire. Internal consistency, test-retest reliability, cross-language reliability, split-half reliability, and face validity were evaluated. Principal component factor analysis was run to assess the factorial validity of the scale.

Results: The scale developed as part of the study was found to have good internal consistency, test-retest reliability, cross-language reliability, split-half reliability, and face validity. Principal component factor analysis yielded a 4-factor structure, which also had good test-retest reliability and cross-language reliability. There was a strong correlation between the 4 factors obtained.

Conclusion: The SPACE developed as part of this study has good psychometric properties.

Key words: Caregivers; Mental disorders; Psychometrics

摘要

目的：开发评估正向照顾经验的工具（正向照顾经验估量表），以及评估此估量表的心理测量特质。

方法：回顾用作评估正向照顾经验某几方面的现成量表，并使用以5点分级评分法的50项问卷调查。研究共纳入203名精神患者的主要照顾者完成问卷，并评估量表的内部一致性、复测可靠性、跨语言可靠度、折半信度，以及表面效度；也以主成分因素分析评估量表的阶乘有效性。

结果：作为研究的一部份，此估量表具良好内部一致性、复测可靠性、跨语言可靠度、折半信度以及表面效度。主成分因素分析产生4因子结构，也有良好复测可靠度和跨语言可靠度，而这4个因素之间也具有强相关性。

结论：作为研究的一部份，正向照顾经验估量表具有良好心理测量特质。

关键词：照顾者、精神错乱、心理测量学

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Introduction

Caregiving is a process by which caregivers (family members, friends, and mental health professionals) provide care in the form of materialistic, emotional, social, and financial support to the individual suffering from an illness. Today, most subjects with severe mental disorders in India receive care on an outpatient basis, consequently most of the care and supervision are provided by the family. The relatives accept the dysfunctional non-earning members, take responsibility for their hospital visits, and supervise medication. Further, due to lack of rehabilitation services

at most places especially in developing countries, this, too, is provided by the family members. Studies have shown that in doing so, caregivers perceive considerable burden, have poor quality of life, and experience psychological morbidity.¹⁻³ However, these do not deter them from taking care of ill family members. Further, it has been shown that caregiving has the potential to be a source of positive transformations in people's lives⁴ and can give rise to a sense of satisfaction.⁵

Although much is known about the negative impact of caregiving, positive aspects of caregiving have not caught much attention from researchers. Since a positive experience is a subjective event, no standard formal definition is available. Various authors have understood positive caregiving in terms of caregiver gains / satisfaction and caregiving experience.⁶⁻⁸ Others have assessed positive caregiving experience in the domains of duty / obligation, companionship, reward, quality of life, enjoyment, and meaning.⁹ Researchers also differ in quantifying what is a caregiver's gain and / or satisfaction. Kramer¹⁰ and López et al¹¹ considered caregiver gains as perceived subjective gains and rewards, and the experience of personal growth that occurs as a result of providing care. While Chen and Greenberg⁴ defined caregiver gains as "the caregiver's perceived personal growth and enhanced interpersonal relationships", Tarlow et al¹² considered positive aspects of caregiving as rewards and satisfaction derived from the relationship. Studies have identified satisfaction with caregiving in the form of feeling fulfilled, important and responsible, as well as a sense of companionship and meaning within the relationship.⁹ In some studies the positive aspects of caregiving included improved relationships, increased self-esteem, feeling appreciated, enhanced sense of meaning or purpose, pleasure, and prevention of further deterioration.^{5,10} The caregiving benefits / gains described in the literature include feeling more useful, feeling needed, learning new skills, and adding meaning to one's sense of self,^{8,13} gaining a sense of fulfilment for meeting a duty / obligation, and enjoyment derived from caregiving itself or from companionship with the care recipient.⁹

The positive aspect of caregiving has been measured as positive caregiving experience,⁶ caregiving satisfaction,⁵ and caregiving gains.¹⁴ The positive caregiving experience, as measured by the Experience of Caregiving Inventory (ECI),⁶ is based on the concept of caregiving appraisal, involving both positive and negative facets of the caregiving experience. The ECI has 8 subscales that measure negative experiences and 2 subscales assessing positive caregiving experience — positive personal outcomes and good aspects of the relationship with the patient. However, this scale does not explore many other positive aspects of caregiving. According to Nolan et al,⁷ caregiving satisfaction has 3 dimensions, i.e. satisfaction derived from: (1) interpersonal dynamics between the carer and the care recipient; (2) intrapersonal or intrapsychic orientation of the carer; and (3) a desire to promote a positive or avoid a negative outcome for the care recipient. Other researchers delved further into

this concept and devised the Caregiver Appraisal Scale for its objective measurement.⁵ The Caregiving Appraisal Scale chiefly assesses the satisfaction of caregiver in relation to caring for the elderly family members. It includes a subscale on caregiver satisfaction which is measured by questions like: (1) the patient's pleasure over something gives the carer pleasure; (2) the carer is happy knowing that the patient is being cared for by the family; (3) helping the patient makes the carer feel closer to the patient; and (4) the patient shows appreciation for what the carer does for him / her. Chen and Greenberg⁴ gave the concept of caregiving gains, and various studies showed that this concept is commonly seen in caregivers of mentally ill subjects.^{5,15,16} For their study, they defined caregiver gains as "the caregiver's perceived personal growth and enhanced interpersonal relationships". In order to study this, they adapted the 10-item Caregiver Gains Scale of Pearlin¹⁴ for the assessment of caregiving gains in carers of schizophrenia patients. As is evident from the review of the literature, scales available for measuring the positive caregiving experience vary in terms of facets assessed and are not comprehensive. Against this background, this study aimed to develop an instrument which evaluates positive caregiving experience in a comprehensive way. The present study also assessed psychometric properties of the scale that was developed.

Development of Instrument

As stated earlier, the aim of the project was to develop the Scale for Positive Aspects of Caregiving Experience (SPACE). Taking into consideration the cultural needs, it was decided to develop the instrument in a questionnaire form, thus making it easy for the caregivers to respond. It was envisaged that the instrument should be easy to understand, comprehensive, and cover experience of a particular time frame. It should also be sensitive to change.

For the development of the present scale, available scales such as ECI,⁶ Caregiver Appraisal Scale,⁸ Adapted Caregiver Gains Scale,⁴ and Positive Aspects of Caregiving¹² assessing some aspects of positive caregiving were reviewed. Items were taken from all these scales; common items were identified and incorporated accordingly into the newly devised scale, which was then reviewed by 3 psychiatrists (experts) for its appropriateness and comprehensiveness. Additionally, 30 caregivers of subjects with severe mental illnesses were interviewed with regard to their positive caregiving experience and gain. Additional changes suggested by the experts that were based on the interview of caregivers were included; items not considered suitable were modified or deleted. A 5-point Likert scale was adopted to measure the responses to the items on the questionnaire. The scale was again reviewed by a panel of 3 different experts (psychiatrists). The prototype scale was tried out on 10 caregivers, and their feedback was taken with regard to ease of understanding, clarity of items being assessed, and the comprehensiveness. An English version of

the scale with 50 items and a 5-point rating (never, rarely, sometimes, often, and always) was finalised.

By using the standard World Health Organization's translation back-translation methodology, the scale was first translated into Hindi. For the same, the finalised English version was given to 2 psychiatrists and 1 social worker (who were well conversant with both English and the Hindi language and were involved in patient care and day-to-day interactions with the caregivers) for translation into simple and clear Hindi, which could be understood by common people and provide conceptual equivalence of the words or phrases, rather than a word-to-word translation. All the 3 translated Hindi versions were reviewed by a panel of 3 bilingual experts (1 psychiatrist, 1 clinical psychologist, and 1 psychiatric social worker) to select the version (item-wise) which had best expression and was most easily understandable for the lay public. Whenever these experts felt that none of the available translations provided adequate expression, they provided alternative wording after reaching a consensus. Similarly, if it was felt that any of the items had inadequate expression, it was then suitably modified. Once the final Hindi translated version was available, it was back-translated into English by a different bilingual psychiatrist and then compared with the original English version. The final Hindi translated version of the questionnaire was then given to 10 caregivers of severe mental disorders for their opinion about the language used and its comprehensiveness. All the suggestions given were incorporated.

Methods

The newly devised Hindi version of the SPACE was given to 203 primary caregivers of patients with severe mental illnesses (schizophrenia, bipolar affective disorders, recurrent depression, and obsessive-compulsive disorder diagnosed based on the ICD-10 criteria) to assess positive caregiving experiences. Among these, 37 were given both English and Hindi versions of the scale to check cross-language equivalence; another 30 were given the Hindi / English version twice, 1 week apart to evaluate test-retest reliability of the scale. Additionally, the data obtained underwent factor analysis to identify various factor domains of positive caregiving experience.

We considered a person as a primary caregiver if he / she was living with the patient and intimately involved in the care of the patient for at least 1 year, i.e. looking after his / her daily needs, supervising the medications, bringing the patient to the hospital, staying with the patient during inpatient stays, and maintaining liaison with hospital staff.

Development of this scale is a part of a research project in which caregivers of patients with severe mental illness were assessed for burden, coping skills, positive caregiving experience, and quality of life. The entire research project has been approved by the Institute Ethics Review Committee. All the participants were recruited after obtaining their written informed consent.

Statistical analyses were carried out using the

Statistical Package for the Social Sciences Windows version 14. Frequency, percentages, means, and standard deviations were calculated for the descriptive data.

Cronbach's alpha was used to estimate the internal consistency of the instrument. Split-half reliability was examined by dividing the questionnaire into 2 halves, and that the Spearman-Brown coefficient and Guttman split-half coefficient were calculated. The test-retest reliability was calculated as kappa values and intraclass correlation coefficients. Similarly, cross-language equivalence was evaluated using intraclass correlation coefficients. Principal component analysis was performed to extract various factors of positive caregiving experience and satisfaction. Orthogonal rotation using the varimax technique was used. For determining the optimal number of the factors, Kaiser-Guttman Rule was used.¹³ Only factors with an eigenvalue of > 1 were included initially, and loadings of ≥ 0.40 were identified as significant loadings to render the extracted factors meaningful and interpretable. When the variable loaded ≥ 0.40 on 2 or more factors, it was assigned to the factor where it had the highest loading. The final factor structure was accepted after running multiple factor analyses based on the findings of a Scree plot. Face validity of the instrument was determined by giving the instrument to another set of 6 mental health professionals (psychiatrists, clinical psychologists, and psychiatric social workers) who were asked to ascertain whether the items included rated positive caregiving experience.

Results

Socio-demographic and Clinical Profile of Patients

The study included 203 patients and their primary caregivers. The socio-demographic and clinical characteristics of the patients are depicted in Table 1. The socio-demographic profile of the caregivers is shown in Table 2.

Psychometric Properties of the Scale

Internal Consistency

The Cronbach's alpha was 0.923 indicating good inter-item correlation.

Split-half Reliability

The split-half reliability was estimated in terms of Spearman-Brown coefficient and Guttman's split-half coefficient. The Cronbach's alpha was 0.867 for part 1 (comprising items 1-25) and 0.87 for part 2 (comprising items 26-50) of the scale. Both the Spearman-Brown coefficient and Guttman's split-half coefficient was 0.83.

Test-retest Reliability

For assessing the test-retest reliability, the scale was given to 37 caregivers twice, 1 week apart. Pearson's correlation coefficient and intraclass correlation coefficient were calculated for each item, and the factor structure obtained for the scale are shown in Tables 3 and 4. For each item,

Table 1. Clinical and demographic profile of the patients (n = 203).*

Variable	Value
Age (years)	34 (12)
Gender	
Male	116 (57%)
Female	87 (43%)
Marital status	
Unmarried	99 (49%)
Married	104 (51%)
Years of schooling	13 (4)
Occupation	
Employed	62 (31%)
Unemployed	80 (39%)
Housewife / household	61 (30%)
Religion	
Hindus	168 (83%)
Non-Hindus	35 (17%)
Family income (Rupees)	16,596 (14,008)
Residence	
Urban	116 (57%)
Rural	87 (43%)
Age of onset of illness (years)	27 (10)
Total duration of illness (years)	7.1 (6.2)
Diagnosis	
Schizophrenia	145 (71%)
Bipolar disorder	26 (13%)
Others [†]	32 (16%)

* Data are shown as mean (standard deviation) or No. (%) of patients.

[†] Including recurrent depressive disorder (n = 23), obsessive-compulsive disorder (n = 4), and other psychotic disorders (n = 5).

there was a significant intraclass correlation between the 2 assessments, indicating good test-retest reliability. The total score obtained for each factor (the 4-factor structure obtained as part of the study) also had good test-retest reliability (Table 4).

Cross-language Reliability

Cross-language reliability was assessed by giving the scale to 30 caregivers twice, 1 week apart. Pearson's correlation coefficient and intraclass correlation coefficient were calculated for each item, and the factor structure obtained for the scale are shown in Tables 3 and 4. There was significant correlation ($p < 0.01$) for both Pearson's correlation and intraclass correlation coefficients among all items of the scale, except for intraclass correlation coefficient of item 24 ($p < 0.05$) and non-significant correlations for items 33, 8, and 39. However, at the factor level, all the 4 factors had significant intraclass correlation coefficient values (Table 4).

Table 2. Demographic profile of the caregivers (n = 203).*

Variable	Value
Age (years)	47 (13)
Gender	
Male	119 (59%)
Female	84 (41%)
Marital status	
Unmarried	17 (8%)
Married	186 (92%)
Years of schooling	13 (5)
Occupation	
Employed	110 (54%)
Unemployed	29 (14%)
Housewife / household	64 (32%)
Relationship with the patient	
Spouse	65 (32%)
Parent	94 (46%)
Sibling	29 (14%)
Other	15 (7%)
Total duration of being the primary caregiver for the patient (years)	6 (5)
Time spent in hours per day in caregiving	4.5 (3.7)

* Data are shown as mean (standard deviation) or No. (%) of patients.

Factor Structure of the Scale

As recommended,¹⁶ the sample was 4 times the number of variables. The Bartlett's test of sphericity was used to test the null hypothesis that the variables were uncorrelated in the population; the approximate Chi-square statistic value was 4.33 with a degree of freedom of 1225, which was significant at $p < 0.001$. The Kaiser-Meyer-Olkin measure of sampling adequacy for the sample was 0.87, suggesting that factor analysis was an appropriate method for analysing the current data. The initial factor structure revealed 14 factors each with an eigenvalue of > 1 , together explaining 64.7% of the variance of the scale. The eigenvalue of factor 1 was 12.9 and explained 25.8% of the variance. For the other 13 factors, the eigenvalues varied from 1.0 to 2.7 with each explaining 2.1 to 5.2% of the variance. The Scree plot showed a tailing at 4- to 5-factor structure. Hence, multiple factor analyses with a principal component varimax rotation were obtained. Finally, the 4-factor structure was retained, with the model explaining 39.4% of the variance (11.3% for Factor 1; 9.9% for Factor 2; 9.5% for Factor 3; and 8.8% for Factor 4).

Table 3 shows various items which loaded on different factors. Of the 50 items, 41 had a factor loading of ≥ 0.40 ; another 3 items (items 7, 11 and 33) had a loading of > 0.39 , hence they were also retained. In all, 44 items were retained in the 4-factor structure: caregiving personal gains (Factor

Table 3. Factor loadings, cross-language reliability, and test-retest reliability of the 50 items.

Item No.	Description	Factor loading				Cross-language reliability (n = 30)		Test-retest reliability (n = 37)	
		Factor 1	Factor 2	Factor 3	Factor 4	Pearson's correlation coefficient	Intraclass correlation coefficient	Pearson's correlation coefficient	Intraclass correlation coefficient
33	You have learned to do new things.	0.395	-	-	-	0.28	0.21	0.90 [‡]	0.95 [‡]
22	You have come closer to God.	0.418	-	-	-	0.80 [†]	0.89 [‡]	0.86 [‡]	0.92 [‡]
8	You have thought that your ill relative is beyond being helped by most things you do for him / her.	0.419	-	-	-	0.12	0.15	0.98 [‡]	0.99 [‡]
37	You have become more understanding of others with problems.	0.428	-	-	-	0.91 [†]	0.95 [‡]	0.81 [‡]	0.89 [‡]
31	Taking care of your ill relative has given your self-esteem a boost / confidence in dealing with others.	0.431	-	-	-	0.92 [†]	0.96 [‡]	0.90 [‡]	0.95 [‡]
36	You have contributed to others' understanding of the illness.	0.471	-	-	-	0.86 [†]	0.92 [‡]	0.98 [‡]	0.99 [‡]
38	You have become closer to friends.	0.475	-	-	-	0.88 [†]	0.93 [‡]	0.96 [‡]	0.98 [‡]
40	Caring for your ill relative has strengthened your relationship with others.	0.504	-	-	-	0.84 [†]	0.91 [‡]	0.87 [‡]	0.93 [‡]
35	You have learnt more about yourself.	0.573	-	-	-	0.82 [†]	0.90 [‡]	0.92 [‡]	0.96 [‡]
34	You have made new friends.	0.598	-	-	-	0.95 [†]	0.97 [‡]	0.95 [‡]	0.97 [‡]
23	You have grown as a person.	0.607	-	-	-	0.89 [†]	0.94 [‡]	0.97 [‡]	0.99 [‡]
20	You have gotten a better idea of what's important in life.	0.651	-	-	-	0.98 [†]	0.99 [‡]	0.94 [‡]	0.97 [‡]
19	You have become more sensitive to persons with disabilities.	0.652	-	-	-	0.93 [†]	0.96 [‡]	0.88 [‡]	0.93 [‡]
21	You have become aware of your inner strengths.	0.667	-	-	-	0.93 [†]	0.96 [‡]	0.94 [‡]	0.97 [‡]
7	You have felt that you are pretty good at figuring out what your ill relative needs.	-	0.399	-	-	0.78 [†]	0.87 [‡]	0.94 [‡]	0.97 [‡]
18	You have been doing what you have to do and not what you want to do, in relation to your ill relative.	-	0.412	-	-	0.94 [†]	0.97 [‡]	0.97 [‡]	0.99 [‡]
4	You have felt that you should be doing more for your ill relative.	-	0.421	-	-	0.84 [†]	0.91 [‡]	0.93 [‡]	0.96 [‡]
5	You have felt that you could do a better job in caring for your ill relative.	-	0.437	-	-	0.93 [†]	0.96 [‡]	0.94 [‡]	0.97 [‡]
32	You have felt good about yourself.	-	0.445	-	-	0.90 [†]	0.95 [‡]	0.84 [‡]	0.91 [‡]
2	You have been certain about what to do about your ill relative.	-	0.468	-	-	0.87 [†]	0.93 [‡]	0.90 [‡]	0.94 [‡]
1	You have been able to fit most of the things you need to do in spite of the time taken by caring for your ill relative.	-	0.504	-	-	0.87 [†]	0.93 [‡]	0.86 [‡]	0.92 [‡]
10	You have felt that you could take care of your ill relative with no help, or could — if you had to.	-	0.522	-	-	0.90 [†]	0.94 [‡]	0.90 [‡]	0.95 [‡]
9	You have felt that the things you do for your ill relative keep him / her from getting worse.	-	0.533	-	-	0.96 [†]	0.98 [‡]	0.93 [‡]	0.97 [‡]
15	You have often thought that you take care of your ill relative more because you want to rather than due to a sense of duty.	-	0.555	-	-	0.88 [†]	0.93 [‡]	0.94 [‡]	0.97 [‡]
3	You have felt reassured knowing that as long as you are helping your ill relative, he / she is getting proper care.	-	0.585	-	-	0.68 [†]	0.80 [‡]	0.83 [‡]	0.90 [‡]

* $p < 0.05$.† $p < 0.01$.‡ $p < 0.001$.

Table 3. (Cont'd)

Item No.	Description	Factor loading				Cross-language reliability (n = 30)		Test-retest reliability (n = 37)	
		Factor 1	Factor 2	Factor 3	Factor 4	Pearson's correlation coefficient	Intraclass correlation coefficient	Pearson's correlation coefficient	Intraclass correlation coefficient
17	The knowledge that you are doing your best gets you through the rough times you have had with your ill relative.	-	0.658	-	-	0.93 [†]	0.96 [‡]	0.90 [‡]	0.95 [‡]
24	You have contributed to your ill relative's wellbeing.	-	0.668	-	-	0.48 [†]	0.47 [*]	0.99 [‡]	1.00 [‡]
11	Your ill relative has shown real appreciation of what you do for him / her.	-	-	0.393	-	0.93 [†]	0.96 [‡]	0.89 [‡]	0.94 [‡]
28	You have shared some of your ill relative's interests.	-	-	0.417	-	0.87 [†]	0.95 [‡]	0.94 [‡]	0.97 [‡]
14	It has made you happy to know that your ill relative is being cared for by his / her family.	-	-	0.479	-	0.90 [†]	0.94 [‡]	0.80 [‡]	0.89 [‡]
13	You have found that helping your ill relative has made you feel closer to him / her.	-	-	0.508	-	0.87 [†]	0.92 [‡]	0.85 [‡]	0.92 [‡]
16	You have seen that your ill relative's old self is showing through in spite of his / her current condition.	-	-	0.540	-	0.89 [†]	0.94 [‡]	0.75 [‡]	0.86 [‡]
25	Your ill relative has made a valuable contribution to the household.	-	-	0.675	-	0.82 [†]	0.90 [‡]	0.85 [‡]	0.91 [‡]
27	You have found that your ill relative is good company.	-	-	0.704	-	0.85 [†]	0.92 [‡]	0.95 [‡]	0.97 [‡]
26	Your ill relative has shown strengths in coping with his / her illness.	-	-	0.751	-	0.83 [†]	0.91 [‡]	0.92 [‡]	0.96 [‡]
43	Caring for your ill relative has made you feel more needed.	-	-	-	0.557	0.96 [†]	0.98 [‡]	0.69 [‡]	0.81 [‡]
44	Caring for your ill relative has enabled you to develop a more positive attitude toward life.	-	-	-	0.497	0.97 [†]	0.99 [‡]	0.75 [†]	0.86 [‡]
48	A strong reason for taking care of your ill relative has been to provide a good model for your own children to follow.	-	-	-	0.610	0.88 [†]	0.94 [‡]	0.94 [‡]	0.97 [‡]
49	You have thought of the help you give your ill relative as an opportunity to repay him / her.	-	-	-	0.507	0.74 [†]	0.85 [‡]	0.86 [‡]	0.92 [‡]
50	Caring for my ill relative has made me appreciate life more.	-	-	-	0.512	0.87 [†]	0.92 [‡]	0.79 [‡]	0.88 [‡]
42	You felt that caring for your ill relative has made you feel more appreciated.	-	-	-	0.532	0.89 [†]	0.94 [‡]	0.84 [‡]	0.91 [‡]
47	Taking care of your ill relative has been a way for you to live up to your religious principles.	-	-	-	0.654	0.82 [†]	0.90 [‡]	0.71 [‡]	0.83 [‡]
46	A strong reason for taking care of your ill relative has been being true to family traditions.	-	-	-	0.669	0.83 [†]	0.90 [‡]	0.92 [‡]	0.96 [‡]
45	Caring for your ill relative has made you feel more important.	-	-	-	0.496	0.91 [†]	0.95 [‡]	0.77 [‡]	0.87 [‡]
39	You have become closer to your family.	-	-	-	-	0.39 [*]	0.26	0.88 [‡]	0.93 [‡]
6	You have felt that you are able to handle most problems in the care of your ill relative.	-	-	-	-	0.88 [†]	0.94 [‡]	0.95 [‡]	0.97 [‡]
12	You have realised that your ill relative's pleasure over some little thing gives you pleasure.	-	-	-	-	0.96 [†]	0.98 [‡]	0.87 [‡]	0.93 [‡]
29	You have felt useful in your relationship with your ill relative.	-	-	-	-	0.81 [†]	0.89 [‡]	0.90 [‡]	0.95 [‡]
30	You have gained a sense of fulfilling duty.	-	-	-	-	0.92 [†]	0.96 [‡]	0.85 [‡]	0.92 [‡]
41	You have met helpful people.	-	-	-	-	0.86 [†]	0.92 [‡]	0.85 [‡]	0.92 [‡]

Table 4. Test-retest reliability and cross-language reliability of the factors.*

Factor structure	Cross-language reliability		Test-retest reliability	
	Intraclass correlation coefficient	Pearson's correlation coefficient	Intraclass correlation coefficient	Pearson's correlation coefficient
Caregiving personal gains	0.92	0.85	0.98	0.95
Motivation for caregiving role	0.98	0.98	0.95	0.91
Caregiver satisfaction	0.96	0.92	0.99	0.98
Self-esteem and social aspects of caring	0.97	0.97	0.90	0.82

* *p* Values are all < 0.001.

Table 5. Correlations between factors.*

Factor structure	Caregiving personal gains	Motivation for caregiving role	Caregiver satisfaction
Caregiving personal gains	-	-	-
Motivation for caregiving role	0.60	-	-
Caregiver satisfaction	0.55	0.66	-
Self-esteem and social aspects of caring	0.56	0.49	0.46

* *p* Values are all < 0.001.

1) which comprised 14 items; motivation for caregiving role (Factor 2) which had 13 items; caregiver satisfaction (Factor 3) consisting of 8 items; and self-esteem and social aspects of caring (Factor 4) which contained 9 items. There was strong correlation among the 4 factors obtained in this study (Table 5).

Face Validity

A panel of 6 mental health professionals reviewed the scale and there was agreement on 90% of the items included in the scale that they ascertained positive caregiving experience.

Discussion

It is now becoming increasingly evident that unlike burden, caregiving is not only associated with negative consequences, but also has a positive impact on the caregivers. Unfortunately, positive experience of caregiving is a less researched area compared with that of burden. Furthermore, the concept of positive caregiving experience lacks uniformity of definition and various authors understood it in terms of caregiver gains / satisfaction, caregiver rewards, caregiving experience, and impact on caregiver's self-esteem.⁶⁻¹² The scale developed as part of this study can be considered a generic scale which has the ability to evaluate positive caregiving experiences associated with chronic mental disorders.

A Cronbach's alpha of 0.7 is considered a desirable attribute of any scale used in clinical practice. The

Cronbach's alpha of our scale was 0.923, indicating its high internal consistency, and that the items included in the scale assessed similar characteristics. The split-half reliability of about 0.87 also indicated a high reliability. The test-retest reliability was also high, suggesting that it measured characteristics that are stable over time.

With respect to test-retest reliability, the intraclass correlation coefficient exceeded 0.8 for all the items; 42 out of these 50 items also had the intraclass correlation coefficient of > 0.9. This indicated that the scale measured a construct that is stable over time. Further, the intraclass correlation coefficient of the factor structure obtained was also high (0.90-0.98). Cross-language reliability of our scale also showed significant correlation between both versions for 47 of the 50 items. Similarly, for the factor structure, the cross-language reliability was very high for all the 4 factors (0.92-0.98), suggesting that the developed scale of either language was user-friendly. The face validity of the scale was also good, indicating that the items included in the scale measured positive experience. Principal component factor analysis yielded a 4-factor 44-item model. These factors are comparable to the existing scales of other researchers. Factor 1 was similar to the Caregiver Gains Scale⁴ and 5 items of the Positive Personal Experience Subscale of ECI.⁶ The Factor 3 of our scale included items from the Caregiver Satisfaction Scale⁸ and the Good Aspect of Caregiving Subscale of ECI.⁶ The Factor 4 included items from the Positive Aspects of Caregiving Scale¹² and Caregiver's Reappraisal Scale.⁸ Most of the items of the Factor 2 came

from the Mastery scale.⁸ In view of the emerging factor structure of our scale, it can be said that people not only take a caregiving role but remain motivated and persist with it due to positive personal gains and personal satisfaction. This is also influenced by the effect of caregiving on their self-esteem and social aspects of caring. These 4 factors attained good correlations with each other, indicating that positive experience in 1 domain is probably associated with similar experiences in others.

Few studies have evaluated the relationship of positive caregiving experiences with psychopathology, level of involvement in care, burden, coping strategies, religious practices, and perceived social support.^{4,10,17-23} However, based on the current level of sparse literature, it is difficult to predict the relationship of positive caregiving experience with other clinical and psychological variables. Moreover, exploring such relationship was not within the scope of the present investigation. To evaluate these, the scale developed in this study would need to be administered along with other scales targeted to the above-described variables.

In this study we examined the cross-language reliability, internal consistency, split-half reliability, and test-retest reliability for the Hindi version. However, we did not examine the same for the English version, which is a limitation of our study. Future research in the same areas of the English version is warranted. The predictive and convergent validity of the scale was also not measured in the present study. In future, this scale should be used with other caregiving experience measuring scales to establish its convergent validity.

Conclusion

This study attempted to develop a comprehensive scale capable of assessing various domains of positive caregiving experience. We believe that the scale has good psychometric properties and cross-language reliability which will be useful in our population.

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