



PARENTAL STRESS SCALE: TRANSLATION AND PRELIMINARY TESTING FOR A GUJARATI SAMPLE

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ABSTRACT

Introduction: Parental Stress Scale is an 18 item self-report scale which represents positive (e.g. emotional benefits, personal development) and negative (demands on resources, restrictions) themes of parenthood. This study was aimed to translate English version of Parental Stress Scale into Gujarati and to do preliminary testing for reliability by a study conducted among medical professionals.

Methods: English version of PPS was translated by two independent bilingual translators into Gujarati. It was back-translated into English by another two independent translators. The translated questionnaire was then gone through cognitive debriefing process, pilot testing and cultural adaptation process. This forward-backward process was repeated until satisfactory agreement was attained.

Results: Mean scores of Gujarati and English version of parental stress scale were 34.14 ± 10.92 and 35.07 ± 10.83 respectively. There was no significant difference between these mean scores (p value 0.310). Reliability coefficients as measured by Cronbach's alpha for the Gujarati scale was calculated 0.924.

Conclusion: High Cronbach's alpha co-efficient was found for the Gujarati version of Parental Stress Scale. We can therefore assert that it is a reliable tool for identifying parental stress. It can be used to show whether an intervention has had a positive effect on parental stress or not among native Gujarati person.

Key words: Parental stress scale, Reliability, Translation, Gujarati PSS, Cronbach's alpha

INTRODUCTION

Stress is an unavoidable, normal experience that is felt when an individual is uncertain if he/she can meet the demands of his/her environment.¹ Depending on the context, stress can be one of three things: 1) positive and conducive to healthy development, 2) simply tolerable with no strong effects, or 3) toxic and conducive to physical, emotional, and mental impairment.² It is important to note that "stress" is defined not necessarily by an individual's experience, but by her behavioral, emotional, cognitive, biological and interpersonal responses to that experience. This response can differ

from person to person, so an exploration of stress requires examining both the causes of and responses to situations experienced as stressful by the individual.

However, while stress is generally defined as a negative emotional experience, in small amounts it can be positively associated with more responsive parenting habits, such as displaying positive feelings towards children.³ Likewise, small amounts of stress promote longevity.⁴ However, too much stress can lead to physical, emotional and mental health risks for problems such as migraine head-

aches, relationship issues or substance use disorders.¹

Parental stress is defined as stress that parents experience not only because of child-rearing, but also due to their social and environmental circumstances, responsibilities and everyday life.⁵

The presence or absence of social support and economic challenges and other factors impacts stress for parents and non-parents alike, but for parents there are added stressors such as child characteristics and parenting responsibilities that influence well-being in general, and parents' mental health in particular.⁵ Beyond individual characteristics such as age, gender, and physical health, there are ecological and contextual factors, including geographical location, socio-economic status, race, and ethnicity that impact the level of stress and threaten the physical and mental health of parents.⁶

There is a diversity of scales for quantifying the level of stress. Parental stress scale (PSS)⁷ was developed by Berry and Jones (1995) as an alternative to the 101-item Parenting Stress Index. It provides a measure that considers positive aspects of parenting as well as the negative, 'stressful' aspects traditionally focused on. This paper describes the development of a Gujarati version of PSS and preliminary testing for reliability by a study conducted among medical professionals.

METHODS

English version of Parental Stress Scale⁷: It is an 18 item self-report scale. Items represent positive (e.g. emotional benefits, personal development) and negative (demands on resources, restrictions) themes of parenthood. Respondents agree or disagree in terms of their typical relationship with their child or children. Five point scale (strongly disagree, disagree, undecided, agree, strongly agree) is being used to score the level of parental stress.

PSS is used to assess the changes in parental stress levels for parents/carers who have accessed targeted support, such as family support, parenting courses and one to one parenting support and the outcomes of services or areas of work focused on improving parents/carers parenting capacity. The scale is relatively short and easy to administer – can be completed in less than 10 minutes. It can be used as a before and after measure. Overall possible scores on the scale range from 18 – 90. The higher the score, the higher the measured level of Parental stress.

Gujarati version of Parental Stress Scale - Translation and pilot study

The study was conducted during months of November and December 2015 at Surat Municipal Institute of Medical Education and Research (SMIMER), Surat. The 18 items of PPS were translated by two independent bilingual translators into Gujarati. Focused group discussion were organized to discuss the quality of translated version. Two other native English speaker who did not have knowledge of English version of the scale then back translated the reconciliated Gujarati version. The backward translation was sent to a group of English experts for comments (health professionals in department of psychiatry). The translated questionnaire was culturally adapted through a cognitive debriefing process that was used to identify any language problems and to assess the degree of respondents understanding of the item's content that was meant to be elicited.⁸ During this stage the reconciled Gujarati version of the PPS was pilot tested with 6 medical faculties of SMIMER, Surat. As part of the cultural adaptation process, in-depth interviews were implemented about the respondents understanding of the questionnaire with the purpose of revealing inappropriately interpreted items and translation alternatives. The participants gave their impression on the clarity of the each item, the relevance of the content to their situation, the comprehensiveness of the instructions and their ability to complete it on their own. They were also encouraged to make suggestions whenever necessary. The final Gujarati version of EPDS that was validated with the medical faculties who participated in the study.

All the faculties of the non-clinical branches of SMIMER, Surat were approached for the study. Only Gujarati origin faculties were included in the study. Total 28 medical faculties were included in the study after written informed consent. Along with the questionnaires, there was a cover letter explaining the purpose of the study, providing the researchers' affiliation and contact information and clearly stating that answers would be confidential and anonymity would be guaranteed in the final data reports. English and Gujarati scales were administered at the interval of one week. Data was entered in Microsoft Excel software and analyzed by SPSS software version 16.

RESULTS

Total 28 medical faculties were included in the study. As shown in table 1 Mean score of Gujarati version of parental stress scale was 34.14 ± 10.92 and that of English version was 35.07 ± 10.83 .

There was no significant difference between mean scores obtained by both the scales (p value 0.310).

Total 18 items were included in the Gujarati version of PSS. Reliability coefficients as measured by Cronbach's alpha for the Gujarati scale was calculated 0.924. Cronbach's alpha based on standardized items was found 0.921.

Table 1: Mean scores for each items of Gujarati and English version of Parental Stress Scale

Item	Mean ± SD for Gujarati PSS	Mean ± SD for English PSS
1	1.64 ± 0.621	1.43 ± 0.634
2	1.93 ± 0.900	2.36 ± 0.989
3	3.50 ± 1.374	3.36 ± 1.569
4	3.36 ± 1.367	3.43 ± 1.260
5	1.36 ± 0.488	1.21 ± 0.418
6	1.14 ± 0.356	1.21 ± 0.418
7	1.07 ± 0.262	1.21 ± 0.418
8	1.71 ± 0.713	1.86 ± 0.651
9	1.93 ± 1.184	1.71 ± 0.976
10	2.14 ± 1.079	2.36 ± 0.989
11	1.93 ± 1.052	1.79 ± 1.031
12	2.43 ± 1.260	2.14 ± 1.268
13	2.07 ± 1.120	1.93 ± 0.979
14	1.50 ± 0.745	1.50 ± 0.839
15	1.64 ± 0.826	2.50 ± 1.374
16	2.07 ± 0.979	2.07 ± 1.120
17	1.57 ± 0.634	1.57 ± 0.742
18	1.14 ± 0.356	1.43 ± 0.504
Total	34.14 ± 10.92	35.07 ± 10.83

Table 2: Item-Total Statistics for Gujarati version of Parental Stress Scale

Item	Scale Mean	Corrected Item-Total Correlation	Cronbach's alpha if item deleted
1	32.50	0.605	0.921
2	32.21	0.863	0.914
3	30.64	0.669	0.920
4	30.79	0.496	0.926
5	32.79	0.311	0.926
6	33.00	0.366	0.925
7	33.07	-0.156	0.929
8	32.43	0.801	0.917
9	32.21	0.513	0.924
10	32.00	0.756	0.916
11	32.21	0.861	0.914
12	31.71	0.901	0.912
13	32.07	0.843	0.914
14	32.64	0.486	0.923
15	32.50	0.819	0.916
16	32.07	0.832	0.915
17	32.57	0.388	0.925
18	33.00	0.563	0.924

Table 2 shows Item-Total statistics for Gujarati version of Parental Stress Scale and Cronbach's alpha if the item deleted. No significant differences were

found among scale means of each items. When 'If item deleted' analysis was applied to scale, item no. 4, 5, 6, 7 and 17 if deleted would slightly increase overall reliability of the scale. Item no. 7 shows negative correlation with the total of scores on all other items.

DISCUSSION

Total 28 participants were included in the study according to inclusion criteria. Both English and Gujarati version of Parental Stress scale were administered in all the 28 participants providing an interval of one week between two scales. There was no significant difference in the mean scores obtained by these scales which shows that the translated version of the PSS was as effective and reliable as the English one.

Cronbach's alpha will usually increase as the inter-correlations among test items increase, and is thus known as an internal consistency estimate of reliability of test scores.⁹ Because inter-correlations among test items are maximized when all items measure the same construct, Cronbach's alpha is widely assumed to indirectly indicate the degree to which a set of items measures a single one-dimensional latent construct.¹⁰ Cronbach's alpha value more than 0.9 is regarded as measure of excellent internal consistency.¹¹ In our study, Cronbach's alpha of Gujarati PSS was 0.924 for the total scale (Items 1-18) which means that it is having excellent reliability. Cronbach's Alpha based on standardized items was found 0.921.

The item-total correlation is the Pearsonian correlation of the item with the total of scores on all other items. A item-total correlation lower than 0.3 means the item is little correlated with the overall scale.¹² In our study, only one item is having score lower than 0.3 which item no. 7. We can consider dropping it from our scale. Cronbach's alpha after dropping it would increase to 0.929 from 0.924.

As has been discussed, all possible efforts were made to produce a Gujarati translation of the PSS as equivalent as possible and high internal consistency reliability and construct validity was obtained. However, influence of cultural differences on the experience of stress cannot be eliminated. What causes stress would differ although this is largely eliminated by the measurement's focus on the stress response. The expression of the stress response may also differ but since the translation process was based on meaning, it identified concepts that were similar to those identified in the original version and recognized that these concepts were related to stress in the target culture. All the study participants in this study were medical undergraduates or postgraduates, so there may be

issue of generalizability of this scale to those person having lower education status.

CONCLUSION

High Cronbach's alpha co-efficient was found for the Gujarati version of Parental Stress Scale. We can therefore assert that it is a reliable and valid tool for identifying parental stress and it can be used by health professionals in their clinical practice for early detection, further assessment and treatment for persons with high scores. It can be used to show whether an intervention has had a positive effect on parental stress or not among native Gujarati person.

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Annexure 1: Gujarati Version of Parental Stress Scale

૧= યોક્કસપણે અસહમત ૨ = અસહમત ૩ = અનિશ્ચિત ૪ = સહમત ૫= યોક્કસપણે સહમત

સ્કોરિંગ (૧ થી ૫ માંથી)

- ૧ હું વાલી તરીકેની મારી ભૂમિકાથી ખુશ છું.
- ૨ તેવું કાંઈજ નથી જે મારા બાળક/બાળકો માટે જરૂરી હોય અને હું ના કરી શકું.
- ૩ મારા બાળક/બાળકોની સારસંભાળ કોઈક વાર હું આપી શકું તેના કરતાં વધારે સમય અને શક્તિ માંગી લે છે.
- ૪ મને કોઈક વાર ચિંતા થાય છે કે હું મારા બાળક/બાળકો માટે પૂરતું કરી રહ્યો છું કે નહીં.
- ૫ હું મારા બાળક/બાળકો પ્રત્યે નિકટતા અનુભવું છું.
- ૬ મને મારા બાળક/બાળકો સાથે સમય પસાર કરવાનું ગમે છે.
- ૭ મારું બાળક/બાળકો મારા માટે સ્નેહ/વાગણીનો મહત્વપૂર્ણ સ્ત્રોત છે.
- ૮ બાળક/બાળકો હોવા એ મને ભવિષ્ય માટે ચોક્કસ અને આશાવાદી દ્રષ્ય આપે છે.
- ૯ મારું બાળક/બાળકો મારા જીવનમાં ચિંતા/તણાવનું મુખ્ય કારણ છે.
- ૧૦ બાળક/બાળકો હોવાના કારણે મારા જીવનમાં ઓછો સમય અને ઓછી રાહત રહે છે.
- ૧૧ બાળક/બાળકો હોવાના કારણે મને આર્થિક બોજ રહે છે.
- ૧૨ મારા બાળક/બાળકોના કારણે વિવિધ જવાબદારીઓ વચ્ચે સંતુલન રાખવું અઘરું પડે છે.
- ૧૩ મારા બાળક/બાળકોનું વર્તન મારા માટે ઘણીવાર શરમજનક અથવા ચિંતાજનક હોય છે.
- ૧૪ જો મને ફરી વાર તક મળે તો હું બાળક/બાળકો ન રાખવાનું પણ નક્કી કરું.
- ૧૫ હું વાલી તરીકેની જવાબદારીનો વધુ પડતો ભાર અનુભવું છું.
- ૧૬ બાળક/બાળકો હોવાનો મતલબ કે મારા જીવન પર ખૂબ જ ઓછું નિયંત્રણ અને ખૂબ જ ઓછા વિકલ્પો.
- ૧૭ હું વાલી તરીકે સંતુષ્ટ છું.
- ૧૮ મારા બાળક/બાળકો મારા માટે આનંદપ્રદ છે.