

Measurement of adolescent's social support: A study on translation and validation of CAS-9

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Objective: To determine the external validity of a social support research instrument translates and validate on a sample of Pakistani adolescents.

Methodology: The Spanish originated "*Cuestionario de Apoyo Social*" (CAS) was translated in Urdu language and construct validity of the instrument was tested by using Confirmatory factor analysis. The study included a total of 706 adolescents.

Results: Results showed good fit for both three and four factor models yet the four factors model is preferred due to the additional information

regarding satisfaction over perceived support. Additionally, the fourth factor also even with its only two items has very good internal consistency i.e., $\alpha = .81$.

Conclusion: The availability of Social Support Scale in Urdu language is expected to facilitate the assessment of various dimensions of social support of adolescents in Pakistan population. (Rawal Med J 202;45:582-585).

Keywords: Social support, adolescents, validation.

INTRODUCTION

Within the realm of human interactions, social support has been regarded as an important variable that specifies the exchange of socio emotional, instrumental and recreational resource.¹ Social support has been operationalized as the instrumental and/or communicative supplies, tangible or hypothetical, given by the community, social networks and intimate relationships.² Currently, concept of social support has been remarkably emphasized as playing an imperative moderating role in the field of mental health because of its protecting role to shield communities from a range of psychological and physical problems.³ Chao advocates that Social support is associated with the psychological well-being of students.⁴ Conversely, lack of social support has found to be linked with stress, depression and mental health problems.⁵ Moreover, high levels of perceived social support were found to be associated with decreased levels of psychological adjustment problems.⁶

Significance of social support in the critical stages particularly during adolescence is well documented in scientific literature.⁷ The main social support sources for adolescents are family, peers, college mates and staff, cultural, sports, social organizations, groups, and online social networks. Multi-dimensional nature of the construct of social

support has been conceptualized and measured in various ways.⁸

There is a surge of interest in the use of brief scale of social support such as "*Cuestionario de Apoyo Social*" (CAS), to measure social support across cultures. CAS was originally developed by Bernal et al.⁹ It has been translated and validated in various languages^{3,10} The instrument has utilized to gauge mediators and moderators of change in treatment research and it has also served as a screening instrument in both clinical and research settings.^{11,12} Hence, the purpose of this study was to translate, establish psychometric properties, and to validate the factor structure of CAS for its distinctive use with the adolescents of Pakistan.

METHODOLOGY

The first step of the study was to translate the scale from English to Urdu. After taking permission from the authors, the scale was translated into Urdu by following Brisling translation method.¹³ Another essential phase in translation of the scale was to certify that potential respondents could understand statements of the translated items. With this aim, final translated scale was administered on 15 volunteer college students. Respondents of this pilot-testing confirmed that translated items were suitable and simple to comprehend. Brief Scale of

Social Support (CAS) consists of 9 items in a Likert 5-point scale ranging from "nothing" to "very much". Emotional dimension is measured with 3 items; interpersonal dimension is measured with two items, and similarly two items gauge material support. Satisfaction with the social support received is assessed through two distinct items.

Reported moderate to high alpha reliability for CAS (CAS $\alpha = .68$, Emotional Support $\alpha = .71$, Interpersonal Support $\alpha = .59$, Material Support $\alpha = .38$, and Satisfaction $\alpha = .89$). Permission from college administration and Informed consent from all students was taken or from parents of the students under 18 years of age.

Statistical Analysis: The factor structure of the Brief Scale of Social Support (CAS) was tested via confirmatory factor analysis.

RESULTS

A total of 1000 adolescents were invited to participate in the study. With 88% response rate, a total of 706 (51% female and 49% male)

participated in the study. The age range of the sample was from 15 to 19 years (mean 17.01 ± 0.94). Initially, descriptive of the sub-scales of social support were calculated (Table 1). Errors were allowed to co-vary within same factors which resulted in a good fit of the model to the data with a Chi square goodness of fit ($\chi^2 = 24.65$; $df = 8$), CFI = 0.98, TLI = 0.93, IFI = 0.98, and RMSEA = 0.05. Range of item loading on three factors were all above the threshold (i.e., Emotional = .52 to .76, Interpersonal = .54 to .62, and Material = .67 to .71) (Table 2).

Table 1. Descriptive and reliability estimates.

Measures	No of items	Female		Male		Alpha
		Mean	S.D	Mean	S.D	
Emotional Support	3	11.07	2.17	10.49	2.20	0.65
Interpersonal Support	2	6.95	1.75	6.88	1.70	0.67
Material Support	2	7.09	1.74	6.95	1.59	0.50
Satisfaction with support	2	7.12	1.69	6.86	1.71	0.81
CAS-7	7	28.45	4.40	26.67	4.92	0.72
CAS-9	9	32.01	5.34	30.97	5.42	0.77

Table 2. Item loadings for three and four factor of CAS.

Dimensions and items	3-Factor	4-Factor
Emotional Support		
How much emotional support did you need last month?	0.76	0.75
How much spiritual support did you need last month?	0.55	0.55
How much advice did you need last month?	0.52	0.53
Interpersonal Support		
How much companionship from other persons did you need last month?	0.54	0.54
How much did you need to participate in social activities last month?	0.62	0.61
Material Support		
How much material support did you need last month?	0.67	0.62
How much did you need support in performing tasks or working last month?	0.71	0.77
Satisfaction		
Was the social support received sufficient?		0.94
How satisfied are you with the support received?		0.73

Table 3. Confirmatory factor analysis of CAS.

Model	Model in CFA	χ^2	df	CFI	IFI	TLI	RMSEA
Three-factor	M1	174.88	11	0.83	0.83	0.56	0.14
	M2	24.65	8	0.98	0.98	0.93	0.05
Four-factor	M1	237.56	21	0.84	0.87	0.71	0.12
	M2	31.79	16	0.99	0.99	0.97	0.03

In three-factor model, (Emotional, Interpersonal, and Material) all of the items were allowed to load on their respective factor. Results showed less than optimal fit indices (Table 3). Further, the contemporary four factor model including Satisfaction as additional dimension was tested. Results showed a good fit of the model to the data with Chi square goodness of fit ($\chi^2 = 31.7$; $df = 16$), CFI = 0.99, TLI = 0.97, IFI = 0.99, and RMSEA = 0.03). As presented in (Table 3), range of the item loading on four factors were all above the threshold (i.e., Emotional = .53 to .75, Interpersonal = .54 to .61, Material = .62 to .67, and Satisfaction = .73 to .94). Finally, the alpha reliability of the brief scale of social support (CAS), were estimated. The results confirmed that four factor model is stable, reliable and gives additional information on usefulness of support from adolescents' perspective.

DISCUSSION

The value of social support can be recognized by its enormous benefits for both physical and mental health because of its direct and buffering effects. Major objective of the present study was to translate and validate the brief and reliable tool for measuring social support for Pakistani adolescents, as developed by Bernal et al.⁹ Significance of social support phenomena for adolescent's mental health and psychological well-being has long been recognized.^{7,11}

The fact should also be taken into consideration that despite significance of social support for adolescents, measurement literature is lacking the scientific instrument that could assess the level of social support of adolescent population. The scarcity of brief measurement scales within the domain of social support created space to adapt and validate a reliable measure (CAS) for the assessment of social support of Pakistani adolescents.

In order to address the objective of the study, CAS was translated following the Brislin translation method.¹³ On the basis of theoretical definitions of social support suggested by Bravo two models were proposed.¹⁴ The CFA though supported both the

three factor model and the four factor model yet the four factor model of social support (CAS-9) is preferred as it included a measure of satisfaction of received support over and above the three factors model containing only sources of social support. In earlier work, three-factor model; CAS-7, was supported by Bernal et al.⁹

Conversely, based on results of the present study, several justifications supported the four factor model of social support as a more precise and comprehensive measure of social support. Mainly, the addition of the satisfaction dimension enhanced the preciseness and comprehensiveness of the measurement of the construct. Empirical literature on social support also encourage the multidimensionality of this construct.^{8,12}

Moreover, dimension of satisfaction showed good reliability and inclusion of the satisfaction dimension also improved accumulated reliability of the scale. Material dimension of social support was observed with comparatively low reliability which is justifiable as the material dimension is assessed with only two items. Nonetheless, the material dimension is theoretically important with practical implications, and it is not unusual for scales with few items to have lower Cronbach's alpha level,¹⁵ hence we recommend to retain the factor. In their validation study, Bernal et al.⁹ also reported low reliability for material dimension.

Keeping in view the requirements within the scenario of testing and measurement, prospective studies should continue to evaluate the psychometric properties of this brief scale of social support with divergent samples. In addition, it is also suggested to compare and contrast this brief instrument with other standard measures of social support.

CONCLUSION

CAS-9 is a reliable measure of social support with adolescent population of Pakistani society. It is a very brief scale, appropriate to be used in clinical and research settings. It is a concise yet multidimensional measure with solid psychometric properties to facilitate screening in both clinical and research settings.

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