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Standardization and validation of peer-support-need scale for undergraduate students in higher educational institutes

Kanwar Vandana, Sonali and Sharma Preeti

Department of Human Development and Family Studies, Punjab Agricultural University Ludhiana, Punjab, India

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Corresponding Author: Kanwar Vandana

Abstract

Peer- Support need refers to the individual's perceived need of help or support from peers to manage their daily life's challenges. In current research work it is defined as support needed by the students from their fellow beings while perusing their studies, that can help them generally in achieving their academic and non-academic goals. Research studies suggest that endeavours that contribute in providing this peer support directly or indirectly can significantly help students in overcoming these challenges and perform better. Informal discussions with the students reflected that they perceive the need for peer- support primarily in educational, social and emotional areas. Keeping the feedback of students in view, current research work was planned to standardize the peer-support-need scale. With help of experts 150 statements were categorized in three areas: Educational, Social and Emotional. SPSS 2023 program was used to analyse the data. Statistical operations like ttest, Cronbach's Alpha coefficient of reliability (reliability coefficient= 0.949 and one-dimensionality for factor analysis were applied. The final version of scale consisted of 49 statements. The responses were recorded on the five- point Likert scale representing the extent of perceived need of peer support in undergraduate students in higher educational institutes. It is concluded that this Peer-Support-Need scale may be used by the teachers, Counsellors to understand and screen their undergraduate students studying in higher educational institutes for providing need-based interventions.

Keywords: Peer support, need, validation, standardization, higher educational institutes

Introduction

Transition from school to college is more convenient than school to university. Work environment is quite different from the colleges in terms of working hours, academic and non-academic activities, student-teacher engagement, advisee and advisor interactions and meeting out the expectations of teachers and guides. University set certain milestones for the faculty and these milestones are reflected in career advancement scheme (CAS). To reach these milestones, Universities promote scientific temperament, individualism, self- dependence, an environment to create and innovate something concrete and solve the emerging issues of the society. In professional arena, one cannot survive in isolation. Individuals working in organizations need to work in teams. Preparation to work in team and to develop collaborative environment, students need to understand the importance of interdependence. It is anticipated that the prepared student will turn out to be an empathetic colleague. For learning interdependence, they need to understand and accept the individual differences; In nutshell, to become a productive worker in any organization, an individual need to grow as an empathetic, supportive individual who does not hesitate in seeking help and is eager to help colleague in crisis or whenever situation demands. To develop these skills, at the very outset, students are required to understand their own expectations from their peers, only then they will be able to understand what their peers expect from them. According to Graves *et al* (2022) ^[1], in academic environment, peers play a vital

role as a support network because of the mutual trust they share, their capacity to detect early signs of distress and their constant proximity, all of which help cultivate feelings of inclusion and acceptance. The literature consistently reports that peer support enhances social connections, emotional well-being and coping mechanisms such as self - esteem and adaptive behaviors (King & Fazel, 2021; Peersman *et al*, 2019). ^[2, 3] Further studies suggest that peer support initiatives can significantly alleviate these challenges by promoting friendships, strengthening social connections, encouraging open communication, and enabling the sharing of both emotional and practical assistance. The present scale was constructed to measure the perceived need of peer support in undergraduate students. Initial step taken to construct the scale was informal discussions with students inside and outside their classrooms and hostels then reviewed the literature related to the need for the peer support in students studying in higher educational institutes. From the reviewed literature it was observed that the relevance of provision of peer support to others was well documented and established only in medical field but with the patients suffering from either mental illnesses or addictions. Research studies related to peer support in educational institutes were very few and that too was available in international institutes like Oxford University. Literature including empirical studies indicated that students when enter higher educational institutes they do struggle with their academics and non-academic activities. Informal discussions reflected that the students

perceive the need for peer support primarily in educational, social and emotional areas. Keeping the feedback of students in view, current research work was planned to standardize the peer- support-need scale. The first step in this endeavour was to construct items.

Item construction

Items were constructed and consisted of a pool of 150 items related to educational, social and emotional area, Fifty items

in each of the three areas were separated and categorized. Then each item was evaluated and categorized with the help of subject matter specialists from the department of Human Development & Family Studies (HDFS), Extension Education & Communication Management (EECM) and experts from the field of Psychology. Area-wise, total 17 items in Educational area, 20 items in Social area and 15 items in Emotional area were selected. The scale now comprised of total 52 items (Table-1).

Table 1: Initial draft of the scale

Area	Statements
Education	I need Peer Support to:
EDU1	Solve study related problems.
EDU2	Excel in studies.
EDU3	Complete assigned tasks.
Area	Statements
EDU4	Improve study related skills.
EDU5	Improve study habits.
EDU6	Do group assignments.
EDU7	Improve feedback related skills.
EDU8	Improve academic skills.
EDU9	Improve presentation skills.
EDU10	Improve questioning skills.
EDU11	Enhance classroom participation activities.
EDU12	Get help in subject related difficulties.
EDU13	Engage in group study.
EDU14	Share the subject related knowledge.
EDU15	Hold group discussions on course content.
EDU16	Develop course related notes.
EDU17	Learn new things.
	Social
SO1	Create larger social network.
SO2	Be more social.
SO3	Get a sense of belongingness.
SO4	Get help in day-to-day problems and overcome adverse circumstances.
SO5	Express feelings.
SO6	Spend leisure hours.
SO7	Have fun and entertainment.
SO8	Enhance interpersonal skills.
SO9	Improve social status.
SO10	Get wider acceptance.
SO11	Get involved in social causes.
SO12	Express my ideas without hesitation.
SO13	Enhance communication skills.
SO14	Improve relations with members of opposite gender.
SO15	Develop close friendships with people of same gender.
SO16	Make choices related to clothing, dressing & grooming.
SO17	Improve personality.
SO18	Participate in extra-curricular activities.
SO19	Overcome language barriers.
Area	Statements
SO20	Spend quality time in hostel and college.
	Emotional
EM1	Get emotional support.
EM2	Avoid stress and study related pressure.
EM3	Establish identity.
EM4	Overcome alienation and loneliness.
EM5	Boost self-confidence.
EM6	Get encouragement to perform well.
EM7	Boost morale.
EM8	Feel safe and secure.
EM9	Cope with stress.
EM10	Improve self-esteem.
EM11	Express anger.
EM12	Overcome helplessness and hopelessness.
EM13	Overcome anxiety & restlessness.
EM14	Overcome sadness.
EM15	Take decisions when I am confused.

Item analysis

For item analysis, sixty students from PAU volunteered to participate in the pilot testing of the scale, were administered the given items. These students were not part of selected sample. Then scores were calculated and summed up. Scores were arranged in increasing order. Two groups were formed in which one group consisted of twenty five percent high scorers and other group consisted of twenty five percent low scorers. Then means were calculated separately for both the high and low scorers. Statistical operation, ttest was applied to check the relevance

of the items. After analysis, the difference in the mean scores in one item, EDU10 (Peer support helps me to improve my questioning skills) from educational area and one item SO6 (Peer support helps me to spend my leisure hours) from social area, of higher scorers and low scorers were found to be non-significant. Therefore, these items were rejected (EDU10 and SO6) and rest of the items were retained. Now the scale contained total 50 items. Table 2 shows the significant differences between the two groups (high scorers and low scorers) of the undergraduate students at 1% level of significance.

Table 2: Item-analysis of the statements

Education	I need Peer Support to:	p-value
EDU1	Solve study related problems.	0.001*
EDU2	Excel in studies.	0.005*
EDU3	Complete assigned tasks.	0.000*
EDU4	Improve study related skills.	0.000*
EDU5	Improve study habits.	0.000*
EDU6	Do group assignments.	0.003*
EDU7	Improve feedback related skills.	0.006*
EDU8	Improve academic skills.	0.000*
EDU9	Improve presentation skills.	0.002*
EDU10	Improve questioning skills.	0.118NS
EDU11	Enhance classroom participation activitie	s.0.050*
EDU12	Get help in subject related difficulties.	0.035*
EDU13	Engage in group study.	0.002*
EDU14	Share the subject related knowledge.	0.000*
EDU15	Hold group discussions on course conten	t.0.003*
EDU16	Develop course related notes.	0.000*
EDU17	Learn new things.	0.002*
Social		
SO1	Create larger social network.	0.000*
SO2	Be more social.	0.000*
SO3	Get a sense of belongingness.	0.010*
SO4	Get help in day-to-day problems and over circumstances.	come adverse 0.000*
SO5	Express feelings.	0.000*
SO6	Spend leisure hours.	0.215NS
SO7	Have fun and entertainment.	0.002*
SO8	Enhance interpersonal skills.	0.013*
SO9	Improve social status.	0.001*
SO10	Get wider acceptance.	0.000*
SO11	Get involved in social causes.	0.002*
SO12	Express my ideas without hesitation.	0.000*
SO13	Enhance communication skills.	0.000*
SO14	Improve relations with members of opposite gender.	0.000*
SO15	Develop close friendships with people of	same gender.0.000*
SO16	Make choices related to clothing, dressing & grooming.	0.002*
SO17	Improve personality.	0.000*
SO18	Participate in extra-curricular activities.	0.002*
SO19	Overcome language barriers.	0.000*
SO20	Spend quality time in hostel and college.	0.000*
Emotional		
EM1	Get emotional support.	0.000*
EM2	Avoid stress and study related pressure.	0.000*
EM3	Establish identity.	0.000*
EM4	Overcome alienation and loneliness.	0.000*
EM5	Boost self-confidence.	0.000*
EM6	Get encouragement to perform well.	0.000*
EM7	Boost morale.	0.002*
EM8	Feel safe and secure.	0.000*
EM9	Cope with stress.	0.000*
EM10	Improve self-esteem.	0.000*
EM11	Express anger.	0.000*
EM12	Overcome helplessness and hopelessness.	0.000*
EM13	Overcome anxiety & restlessness.	0.000*
EM14	Overcome sadness.	0.000*
EM15	Take decisions when I am confused.	0.001*

*p-values are significant at the 0.01 level (2-tailed) NS- Non-significant

After item analysis the reliability of the scale was assessed by applying Cronbach' Alpha using statistical program for social sciences (SPSS 23).

Reliability analysis: Reliability of the scale was assessed by using Cronbach's Alpha coefficient of Reliability depicted in Table-3

Table 3: Assessment of Reliability of the scale

Areas of Peer-Support-Need	No. of items	Cronbach's Alpha coefficient of Reliability
Educational	16	0.874
Social	19	0.854
Emotional	15	0.915
Overall	50	0.949

The high Cronbach's Alpha value of 0.887 demonstrates strong internal consistency of the scale (Table 3). With reliability coefficients exceeding 0.75 in all the areas, the scale was considered reliable for measuring the need of peer support in undergraduate students.

Validity analysis

To establish the validity of the scale, Content validity and construct validity of the scale was assessed. The content validity was determined by the experts. For examining the construct validity of the scale, factor loadings/constructs were extracted using factor analysis (Table 4)

Table 4: Construct Validity of the items with factor loadings

Educational component		
	1	2
EDU1	.776	-.032
EDU2	.668	-.363
EDU3	.537	-.473
EDU4	.743	-.122
EDU5	.623	-.012
EDU6	.275	.552
EDU7	.419	.264
EDU8	.745	-.191
EDU9	.539	-.263
EDU10	.328	-.137
EDU11	.437	.368
EDU12	.608	.247
EDU13	.402	.750
EDU14	.625	.232
EDU15	.514	.150
EDU16	.809	.051
EDU17	.694	-.273
Social component		
	1	2
SO1	.633	-.281
SO2	.557	-.373
SO3	.511	-.591
SO4	.574	-.301
SO5	.575	.309
SO6	.215	.470
SO7	.508	.515
SO8	.483	.260
SO9	.646	.063
SO10	.560	.238
SO11	.594	-.005
SO12	.607	-.152
SO13	.612	-.397
SO14	.532	-.020
SO15	.678	-.292
SO16	.556	.123
SO17	.679	.187
SO18	.408	.040
SO19	.466	.413
SO20	.466	.352
Emotional component		
	1	2
EM1	.777	-.272
EM2	.774	-.058
EM3	.700	-.076
EM4	.731	-.262
EM5	.676	.569
EM6	.728	.506
EM7	.563	.632
EM8	.671	.324
EM9	.646	-.223
EM10	.657	.268
EM11	.556	-.106
EM12	.676	-.401
EM13	.696	-.422
EM14	.757	-.293
EM15	.514	-.023

Factor loadings help to understand to what extent a variable is influenced by a factor. Items with factor loadings below a threshold (i.e 0.4) were discarded, as they were considered weak and had no relationship with the identified factors. Factor loadings close to 1 or -1 depict strong influence. Factor analysis in Table 4 indicated that the Items EDU6, EDU10 and SO6 were rejected because their factor loadings (shown in shaded rows against the respective item) were less than 0.4. After establishing the reliability and validity, the final version of scale consisted of 49 statements categorized in three areas: Educational, Social and Emotional. The responses were recorded on the five-point Likert scale (Table 5) representing the extent of perceived need of peer support in undergraduate students in higher educational institutes. Finally, the scale was administered and responses were recorded.

Table 5: Five-point Likert scale representing the extent of perceived need of peer support

Extent of Perceived Need of Peer Support	Raw Scores
Always	4
Frequently	3
Occasionally	2
Rarely	1
Never	0

Administering the scale

Locale of the study

The study was carried out in three Higher Educational Institutes namely- Punjab Agricultural University (PAU) Ludhiana, Chaudhary Charan Singh Haryana Agricultural University (CCSHAU) Hisar, and Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya (CSKHPKV) Palampur. The representative sample from the three Universities as per the estimated number of students enrolled in the University was calculated at 90% level of confidence and 5% margin of error as follows

Sample selection

A quasi-experimental design was used to for the selection of sample. The study was conducted with sample size of 900 undergraduate students, volunteered to participate from the

constituent colleges of their respective University. The total sample of undergraduate students was equally distributed across locale and gender which means at each higher educational institutes, total sample size was comprised of 300 undergraduate students and the total no. of female undergraduate students was 450 and the total no. of male undergraduate students was 450.

Age and Gender wise norms of the standardized scale

Table 6: Age and Gender-based Norms

Age	Gender			
	(n=450)	Support -Need	(n=450)	Support-Need
	f	Mean $\pm$ S.D.	f	Mean $\pm$ S.D
16-18	172	3.08 $\pm$ 0.72	113	2.88 $\pm$ 0.73
18-20	228	3.04 $\pm$ 0.70	262	2.88 $\pm$ 0.68
20-22	45	2.88 $\pm$ 0.80	69	2.88 $\pm$ 0.75
22-24	5	3.00 $\pm$ 0.00	6	2.66 $\pm$ 0.51

The table 6 represents the age and gender-based norms. From the data figures it is clearly reflected that among different age groups, majority of the undergraduate students perceived the need of peer support was in the age range of 18-20 years followed by 16-18 years of students. Proportion of students aged 22-24 years of age was very small. This may be attributed to the factor that over the time as students' progress towards the completion of their degree program they get adjusted to the academic environment and developed connections with their classmates, roommates and faculty. Means were found to be almost equal for all age range except in the age range of 20-22 years. Across gender, females' mean scores were higher than the male students which indicated that the females perceived more need for the support from their peers in comparison to their male counterparts in all of the age groups. Mean scores of male students in comparison to their counterparts in the age range of 22-24 years were comparatively very less which indicated that as male students progressed in their studies they relied less on their peers. It may be concluded that younger students perceived higher peer support in comparison to the older ones.

Table 7: Percentile Norms, Score Range and Interpretation of Peer-Support-Need Scale

Percentiles	Extent of Peer-Support-Need	Area-wise Range of Raw Scores				
		Educational	Social	Emotional	Overall	Interpretation
P75 – P95	Always	45-60	57-76	45-60	147-196	Very high
P25 – P75	Frequently	30-45	38-57	30-45	98-147	High
P5 – P25	Occasionally	15-30	19-38	15-30	49-98	Less
P5	Rarely	1-15	1-19	1-15	1-49	Very less
<P5	Never	0	0	0	0	No need

Table 7 represents the extent of need of peer support perceived by the undergraduate students. Classification of perceived levels of peer support need found to be aligned with the norms which established the internal consistency. Interpretation of the scale is higher the score higher is the need for the Peer Support. Research work focussed on establishing age and gender-based norms and to interpret percentile classifications across educational, social and emotional domains of Peer-Support Need.

Conclusion

Results indicated that need for the peers' support in

undergraduates in higher educational institutes decreases as they progress in their age. The need is higher in female students as compared to male students. This standardized scale successfully established the norms and classification based on the extent of perceived need of peer support. With the help of norms and classification, undergraduate students may be screened for providing need-based interventions in the State Agricultural University.

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