Development of emotional health scale

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ABSTRACT

Background: Emotional health has been associated with various traits of personality both positive and negative. There is paucity of Indian literature on the subject; especially involving emerging adults. Presently there is no scale available to measure the same in Indian scenario. **Objective:** to develop a scale to measure emotional health of emerging adults. **Materials and methods:** Five dimensions of Emotional Health were selected viz. self-awareness, self-esteem, self-confidence, emotional management and social relations. The paper contains the procedure for development and standardization of emotional health scale. **Results:** The scale was statistically analyzed through principal component analysis, split-half method and Factor analysis. The scale has reliability and validity.

Key Words : Emotional health scale, Emerging adults

INTRODUCTION

There is increasing international interest in the concept of emotional well-being and its contribution to all aspects of human life. Demand for instruments to monitor emotional well-being at a population level and evaluate emotional health promotion initiatives is growing. Over the last few decades, there is a growing concern about rapidly changing patterns of emotional expression and the factors that pose risk for emotional health. These changes create new needs and opportunities for research and practices in the area of emotional health.

Bird and Gerlach (2005) describe emotional health and wellbeing as "the subjective capacity and state of mind that supports us to feel good about how individuals are and confident to deal with present and future circumstances. Emotional health is a state of mental wellbeing which can be affected by external life experiences as well as inner resilience and ability to cope. (Healthy education authority, 1997).

Emotional health is about our ability to acknowledge and respect our own emotions as well as those of others (Samaritans, 2008). Emotional health is recognized as having major consequences for health and social outcomes. This has given rise to new positive psychological therapies that are explicitly focused on facilitating emotional health. However the field of emotional health is under-researched partly because of the lack of appropriate population-based measures. There is demand from emotional health promotion practitioners for a measure with which they can evaluate their programmes. Existing instruments in this field take different conceptualizations of well-being as their starting point. The commonly-used twenty-item PANAS scale describes affective-emotional aspects of well-being and is comprised of two dimensions: positive and negative affect (PANAS-PA and PANAS-NA) which are reported as distinct and independent concepts. In contrast, the five-item Satisfaction with Life Scale (SWLS) aims to measure cognitive-evaluative facets of well-being. The 54 item Scale of Psychological Well-Being (SPWB) focuses on eudaimonic well-being and assesses psychological functioning. Its sub-scales measure autonomy, self-acceptance, and environmental mastery, purpose in life, personal growth and positive relations with others. The five-item Short Depression-Happiness Scale (SDHS) developed for use in therapeutic settings assesses well-being as a continuum between the two states of depression and happiness. All these instruments cover aspects of mental illness as well as mental health and include positive and negatively worded items. The positively worded five items WHO Wellbeing Index (WHO-5) aims to measure overall well-being and covers aspects of physical as well as mental health. The development and testing of a new scale- "Emotional Health Scale" is necessary and essential.

METHODOLOGY

Development of emotional health scale :

Cabrera-Nguyen (2010) states, "increasing the availability of instruments with demonstrated reliability and validity may also help practitioners select evidence-based interventions that best match the needs of their clients." While this research was focused specifically on the field of social work, Cabrera-Nguyen (2010) speaks of a need that is also present the field of psychology.

Emotional health is operationalised as "one's own thinking, feeling and effective management of emotions and the scale was developed as a very expedient device that can be used with young adults in order to access a person's emotional state across a wide variety of defined life content areas. The version of the scale used in this study was specifically developed and validated for use with college-aged students. Emotional health and its concepts are operationalised as follows:

– Emotional health is one's own thinking and feeling and effective management of emotions in social relations. It means "it is the competency of the individual to understand one's own abilities, capacities, thinking, feelings, behavioral tendencies and manage them appropriately in social relations".

– Self-awareness is the tendency of thinking about oneself. It means that the individual's understanding of one's own abilities, capacities, potentialities, thinking, feelings, and behavioral tendencies and also to modify the understanding of these according to their affective role in

life.

– Emotional management is the tendency of management of one's own emotions. It means "it is the individual tendency to express emotions and behaviors appropriately in a wide range of situations under demands and pressures".

– Self-confidence is the tendency to trust oneself. It means "it is the individual's predisposition to be aware of the needs, the expectations and views of people in arriving at decisions and solutions in a group".

– Self-esteem is perceived self-worth and competence of oneself. It means "it is the individual perception of self worthiness of one's own capabilities in social relations".

A questionnaire of emotional health was prepared. The items relating to five dimensions of emotional health namely, self-awareness, emotional management, self-confidence, social relation and self-esteem were generated by two ways. Firstly, the review of literature on emotional health, its dimensions and conceptualizations was the base for developing the items. Secondly, the items of existing scales related to each of the dimension were reviewed. Items were rewritten so that they could be applied to assess emotional health. DeVellis (2011) states "Theory is a great aid to clarity. Relevant social science theories should *always* be considered before developing a scale."

Reporting of the present EMOTIONAL HEALTH SCALE is on par with the guidelines provided by Cabera-Nguyen (2010) in their study which clearly states the reporting of any scale development.

Initially, 150 items consisted of 15 positive and 15 negative statements on each of 5 dimensions were administered on a sample of 97 judges (who were specialized in the field of education, psychology, human development, extension education, psychiatry and clinical psychology) to adjudge relevancy of each statement in relation to its concept. The relevancy index of each statement was calculated and   index of each statement was calculated from 47 to 92. Each item of each dimension was arranged separately in the descending order on the basis of relevancy index.

The relevancy index of 70 and above was criterion to select an item. On the basis of this criterion, 16 statements of highest relevancy on each dimension of emotional health were selected for further analysis. Out of 150 items, 80 items were selected and the relevancy index of each of the selected item ranged between 74 and 92.

Out of 80 items, 37 items were "false-keyed" (reversely scored) while 43 items were "true-keyed" (directly scored). Each item was to be rated on 5 point scale namely always, most of the times, sometimes, rarely and never.

Sample for the standardization of the scale :

In order to determine the applicability and homogeneity of the items, 80 items were administered on a purposively selected homogeneous group of 109 undergraduate students of I year B.Sc. (Agriculture) which comprised of 50 girls and 59 boys. The age of the participants ranged from 18.6 to 22 years. The participants themselves responded to each item. The data was subjected to Pearson's Correlation analysis and Criterion Groups't- test for selection of items. Fisher *et al.*(2013) in their meta analytical investigation found that the majority of authors used the advice/review of experts to eliminate items, low factor loadings

was one of the more prominently used criteria. Hence present study adheres to insignificant low factor loadings to eliminate items.

RESULTS AND DISCUSSION

Self-awareness:

Selection of item by coefficient of correlation:

The results of Table 1 exhibited coefficient of correlation of each item of self-awareness with its component and with the scale. The correlation value of each item was between 0.24 and 0.67 and was significant at least at 0.05 level for the component. The correlation value of each item with the scale was between 0.22 and 0.64 and was significant at least at 0.05 level. Hence all the items were retained.

Selection of item by factorial analysis for self-awareness:

The results of Table 1 explicated the principal component analysis with Varimax rotation and forced solution of self awareness component of emotional health. The results revealed the values of factor loading ranged from 0.41 to 0.67 which were found to be significant at 0.01 level of significance. Hence all the items were categorically confirmed to include under self-awareness (Table 1).

St. No.	Statement	Self-awareness	Emotional health	Factor loading
**Table 1 : Factor loading with varimax rotation and Coefficient of correlation between each item of self-awareness and its component and also with the scale**
1	I understand each of my emotion	0.342**	0.315**	.670
6	I identify the reasons for my feeling	0.418**	0.371**	.568
11	I know my duties	0.499**	0.479**	.562
16*	I postpone that what is to be done today	0.670**	0.643**	.557
21*	It is not possible for me to take decision in difficult situation	0.337**	0.366**	.499
26*	I think too much when anybody makes comments about me	0.565**	0.501**	.488
31	I plan before starting any work	0.497**	0.515**	.463
36	I easily adjust in new situation	0.393**	0.322**	.456
41*	I think too much about minor problem	0.446**	0.369**	.446
46	I complete works according to their importance	0.562**	0.482**	.442
51*	I feel helpless when I face a problem	0.558**	0.501**	.423
56	I take initiative to talk with stranger	0.423**	0.303**	.418
61	I learn new thing which contributes to my life	0.463**	0.470**	.416
66*	I feel that there is no solution to my problem	0.557**	0.480**	.414
71	I think from different perspectives to take a decision	0.488**	0.441**	.414
76*	I commit mistakes in work under pressure	0.456**	0.447**	.413

**- significant at 0.01 level; *- indicates negative statements.

Selection of item by criterion groups't-test:

The results of Table 2 denoted that t-value of each statement was between 1.82 and 8.27 and was significant at least at 0.05 level. Hence none of the item was deleted (Table 2).

Table 2 : Criterion groups't -value of each item of self-awareness

St. No.	Statement	Group 1 (n=29)	Group 2 (n=29)	t-value
1	I understand each of my emotion	4.48 (0.87)	3.75 (1.09)	2.79**
6	I identify the reasons for my feeling	4.48 (0.82)	3.37 (1.29)	3.86**
11	I know my duties	4.93 (0.25)	3.75 (1.27)	4.86**
16*	I postpone that what is to be done today	4.37 (0.90)	2.41 (0.90)	8.27**
21*	It is not possible for me to take decision in difficult situation	4.03 (0.90)	3.10 (1.01)	3.69**
26*	I think too much when anybody makes comments about me	3.75 (0.91)	2.13 (1.12)	6.02**
31	I plan before starting any work	4.55 (0.82)	3.27 (0.88)	5.68**
36	I easily adjust in new situation	2.58 (1.21)	2.08 (1.08)	1.82**
41*	I think too much about minor problem	3.62 (1.04)	2.96 (1.26)	2.14**
46	I complete works according to their importance	4.72 (0.59)	3.44 (0.98)	5.98**
51*	I feel helpless when I face a problem	3.68 (0.92)	2.62 (0.97)	4.26**
56	I take initiative to talk with stranger	3.55 (1.24)	2.62 (1.17)	2.93**
61	I learn new thing which contributes to my life	4.89 (0.80)	3.72 (1.06)	5.68**
66*	I feel that there is no solution to my problem	4.37 (0.77)	3.10 (1.08)	5.16**
71	I think from different perspectives to take a decision	4.68 (0.60)	3.79 (1.04)	3.99**
76*	I commit mistakes in work under pressure	3.68 (0.90)	2.68 (1.00)	3.56**

- significant at 0.01 level; *- indicates negative statements

Emotional management :

Selection of item by coefficient of correlation:

The results of Table 3 exhibited coefficient of correlation of each item with its component

Table 3 : Factor loading with varimax rotation and coefficient of correlation between each item of emotional management and its component and also with the scale

St. No.	Statement	Emotional management	Emotional health	Factor loading
2*	I am unable to hide my bad mood	0.390**	0.327*	.664
7*	I find it difficult to control my anger	0.549**	0.382**	.636
12*	I react emotionally in problematic situation	0.512**	0.369**	.549
17*	I feel tense before important event	0.375**	0.439**	.539
22*	I become nervous immediately if I make any mistake	0.539**	0.389**	.538
27*	I become irritated when work is not done according to my suggestion	0.377**	0.361**	.526
32*	I feel bad if anyone insults me	0.538**	0.334**	.512
37*	I feel restless I am under pressure	0.636**	0.497**	.483
42*	I regret after I do which I should not have done	0.367**	0.451**	.444
47*	I worry about my weaknesses	0.526**	0.387**	.417
52*	I feel inferior to others	0.417**	0.478**	.390
57*	I recover from disappointment immediately	0.483**	0.472**	.377
62*	When I am sad, I am unable to control myself	0.664**	0.470**	.375
67*	I become upset when anybody argues with me	0.564**	0.520**	.375
72*	When I am disturbed I am unable to do any work	0.658**	0.531**	.372
77*	I over react to simple issue under tension	0.368**	0.392**	.370

- significant at 0.01 level; *- indicates negative statements

and with the scale. It revealed that correlation value of the items was between 0.22 to 0.531 for the scale and from 0.37 to 0.66 for its component. Hence all the values were retained for criterion groups't-test analysis.

Selection of item by factorial analysis for emotional management:

The results of Table 3 explicated the principal component analysis with Varimax rotation and forced solution of emotional management component of emotional health. The results revealed the values of factor loading ranged from 0.37 to 0.66 which were found to be significant at 0.01 level of significance. Hence all the items were included in the scale. (Table 3).

Selection of item by criterion groups't-test analysis:

The results of Table 4 explicated criterion groups't-value. The t-value of each statement was between -2.26 and 6.45 and each item was significant at least at 0.05 level. Therefore all the 16 items were selected for the emotional management component of emotional health scale (Table 4).

Table 4 : Criterion groups't-value of each item of emotional management				
St. No.	Statement	Group 1 (n=29)	Group 2 (n=29)	t-value
2*	I am unable to hide my bad mood	3.34 (1.34)	2.55 (0.82)	2.70**
7*	I find it difficult to control my anger	3.96 (1.14)	2.72 (1.27)	3.88**
12*	I react emotionally in problematic situation	3.93 (0.84)	2.62 (1.01)	5.35**
17*	I feel tense before important event	4.41 (0.86)	3.17 (1.19)	4.52**
22*	I become nervous immediately if I make any mistake	3.24 (1.12)	2.31 (1.00)	3.32**
27*	I become irritated when work is not done according to my suggestion	3.20 (1.20)	2.51 (1.08)	2.28**
32*	I feel bad if anyone insults me	3.13 (1.36)	2.24 (1.21)	2.65**
37*	I feel restless I am under pressure	4.00 (0.96)	2.41 (0.90)	6.45**
42*	I regret after I do which I should not have done	4.41 (0.82)	2.86 (1.32)	5.34**
47*	I worry about my weaknesses	4.72 (0.59)	3.44 (0.98)	5.98**
52*	I feel inferior to others	4.27 (0.92)	2.96 (1.17)	4.71**
57*	I recover from disappointment immediately	4.31 (0.76)	3.06 (1.06)	5.10**
62*	When I am sad, I am unable to control myself	3.86 (1.02)	2.55 (1.15)	4.57**
67*	I become upset when anybody argues with me	2.85 (1.26)	3.37 (1.17)	-2.26*
72*	When I am disturbed I am unable to do any work	3.68 (0.76)	2.24 (0.95)	6.40**
77*	I over react to simple issue under tension	4.10 (0.90)	3.24 (1.21)	3.07**

**- significant at 0.01 level; *- indicates negative statements

Self-confidence :
Selection of item by coefficient of correlation:

The results of Table 5 exhibited the coefficient of correlation of each item with the scale and its component. It revealed that correlation value of the items for overall scale was between 0.168 and 0.616 and were all significant at least at 0.05 level. For its component the

values were between 0.28 and 0.71. Hence all the items were retained for criterion group t-test analysis.

Selection of item by factorial analysis for self confidence:

The results of Table 5 explicated the principal component analysis with Varimax rotation and forced solution of self confidence component of emotional health. The results revealed the values of factor loading ranged from 0.38 to 0.70 which were found to be significant at 0.01 level of significance. Hence all the items were included in the scale (Table 5).

St. No.	Statement	Self-confidence	Emotional health	Factor loading
	Table 5 : Factor loading with varimax rotation and Coefficient of correlation between each item of self-confidence and its component and also with the scale			
3	I work hard to achieve my goal	0.712**	0.507**	.698
8	When I start any work, I complete it	0.603**	0.536**	.664
13	I do any work systematically	0.349**	0.310**	.611
18	I work with full devotion	0.665**	0.612**	.585
23	I try to improve my performance	0.625**	0.426**	.583
28	I use all my efficiency to work	0.489**	0.442**	.562
33*	I leave work if any difficulty arises	0.551**	0.616**	.559
38	I work consistently to achieve my goal	0.562**	0.320**	.543
43	I encourage myself to perform to the best of my ability	0.430**	0.298**	.479
48	I am capable to handle difficult problem	0.471**	0.426**	.460
53*	I set up a long term goal but I get diverted by minor problem	0.380**	0.528**	.396
58*	I have difficulty in deciding about which work is to be done first	0.309**	0.522**	.392
63*	I feel that I lack the ambition which most people have	0.496**	0.502**	.390
68	I know what I want to become in life	0.488**	0.389**	.387
73	I enjoy to do any work	0.582**	0.505**	.385
78	I know how to get what I want	0.501**	0.422**	.383

**- significant at 0.01 level; *- indicates negative statements

Selection of item by criterion groups't-test:

The results of Table 6 explicated criterion group t-value. The t-value of each item was between 1.41 and 8.90 and each item was significant at least at 0.05 level. Therefore all the 16 items were selected for the self-confidence dimension of EH scale (Table 6).

Social relations :
Selection of item by coefficient of correlation:

The results of Table 7 exhibited the coefficient of correlation of each item with the EH-scale and its component. It revealed that correlation value of each item for overall scale ranged between 0.078 and 0.437 and for its component, value ranged between 0.15 and 0.56 and were all significant at least at 0.05 level. Hence all the items were retained for criterion group t-test analysis.

Table 6 : Criterion group t-value of each item of self-confidence				
St. No.	Statements	Group 1 (n=29)	Group 2 (n=29)	t-value
3	I work hard to achieve my goal	4.72 (0.51)	3.37 (1.11)	6.05**
8	When I start any work, I complete it	4.65 (0.55)	3.37 (0.94)	6.29**
13	I do any work systematically	4.48 (0.82)	3.93 (1.06)	2.19**
18	I work with full devotion	4.82 (0.38)	3.20 (0.90)	8.90**
23	I try to improve my performance	4.68 (0.71)	3.61 (1.16)	4.66**
28	I use all my efficiency to work	4.27 (0.95)	3.17 (1.10)	4.06**
33*	I leave work if any difficulty arises	4.8 (0.68)	2.86 (1.17)	7.86**
38	I work consistently to achieve my goal	4.44 (0.98)	3.89 (1.04)	2.06**
43	I encourage myself to perform to the best of my ability	4.68 (0.80)	3.96 (0.98)	3.07**
48	I am capable to handle difficult problem	4.50 (0.85)	2.91 (1.39)	12.49**
53*	I set up a long term goal but I get diverted by minor problem	2.34 (1.14)	3.55 (1.05)	-4.17**
58*	I have difficulty in deciding about which work is to be done first	3.89 (0.77)	2.62 (1.08)	5.16**
63*	I feel that I lack the ambition which most people have	4.03 (0.98)	2.72 (1.13)	4.71**
68	I know what I want to become in life	4.51 (0.87)	3.16 (1.52)	9.72**
73	I enjoy to do any work	4.76 (0.43)	3.27 (1.09)	6.75**
78	I know how to get what I want	4.41 (0.68)	3.44 (1.18)	3.80**

**- significant at 0.01 level; *- indicates negative statements

Selection of item by factorial analysis for social relations:

The results of Table 7 explicated the principal component analysis with Varimax rotation and forced solution of social relations component of emotional health. The results revealed the values of factor loading ranged from 0.32 to 0.54 which were found to be significant at 0.01 level of significance. Hence all the items were included in the scale (Table 7).

Selection of item by criterion groups't-test:

The results of Table 8 explicated criterion group t-value. The t-value of each item was between 0.52 and 4.75 and each item was significant at least at 0.05 level. Therefore all the 16 items were retained for the social relation dimension of EH-scale (Table 8).

Self-esteem Selection of item by coefficient of correlation:

The results in Table 9 depict the coefficient of correlation of each item with the EH-scale and its component. It revealed that correlation value of each item for overall scale ranged between 0.199 and 0.551 and for its component the value ranged from 0.36 and 0.62 and were all significant at least at 0.05 level. Hence all the 16 items were retained for criterion group t-test analysis.

Selection of item by factorial analysis for self-esteem:

The results of Table 9 explicated the principal component analysis with Varimax rotation and forced solution of self esteem component of emotional health. The results revealed the

Table 7 : Factor loading with varimax rotation and Coefficient of correlation between each item of social relations and its component and also with the scale

St. No.	Statement	Social relations	Emotional health	Factor loading
4	I understand feelings of others when they talk	0.493**	0.410**	.536
9	I support others to fulfill their expectations	0.327**	0.334**	.495
14	I encourage others to express their feelings	0.495**	0.264**	.493
19*	I ignore feelings of others if doing so I fulfill my desire	0.536**	0.435**	.480
24*	I think of my own problem without giving time to listen to other people's problem	0.455**	0.393**	.447
29	I take opinion of different people to find a solution to a problem	0.256**	0.396**	.396
34	I request other people to help a friend who is in difficulty	0.567**	0.495**	.363
39	I give importance to others while working with them	0.383**	0.355**	.350
44	I give importance to others' view in discussion of a problem	0.350**	0.437**	.342
49	I take initiative to talk with a friend who is upset	0.363**	0.397**	.337
54*	I use friends' name to achieve my goal against their willingness	0.447**	0.327**	.335
59	I enjoy by making comments on others	0.342**	0.300**	.332
64*	I expect friends help without knowing their feelings	0.480**	0.36**	.330
69	I help others to solve their problem	0.379**	0.309**	.328
74	I make friendship easily	0.355**	0.096*	.322
79*	I don't accept my mistake in group	0.339**	0.345**	.321

**- significant at 0.01 level; *- indicates negative statements

Table 8 : Criterion groups't-value of each item of social relations

St. No.	Statement	Group 1 (n=29)	Group 2 (n=29)	t-value
4	I understand feelings of others when they talk	4.34 (0.89)	3.55 (0.86)	3.41**
9	I support others to fulfill their expectations	4.13 (1.02)	3.48 (0.94)	2.52**
14	I encourage others to express their feelings	4.34 (0.93)	3.72 (1.09)	2.31**
19*	I ignore feelings of others if doing so I fulfill my desire	4.10 (1.01)	2.89 (1.11)	4.32**
24*	I think of my own problem without giving time to listen to other people's problem	4.13 (0.91)	2.93 (1.13)	4.46**
29	I take opinion of different people to find a solution to a problem	3.72 (1.06)	3.10 (1.23)	2.04*
34	I request other people to help a friend who is in difficulty	3.34 (1.00)	3.17 (0.80)	0.52
39	I give importance to others while working with them	4.48 (0.94)	3.96 (1.11)	1.90
44	I give importance to others' view in discussion of a problem	4.51 (0.68)	3.48 (0.94)	4.75**
49	I take initiative to talk with a friend who is upset	4.48 (0.78)	3.66 (1.26)	3.00**
54*	I use friends' name to achieve my goal against their willingness	4.68 (1.05)	3.51 (0.76)	3.79**
59	I enjoy by making comments on others	4.72 (0.70)	3.93 (1.09)	3.27**
64*	I expect friends help without knowing their feelings	4.51 (0.94)	3.51 (1.24)	3.44**
69	I help others to solve their problem	3.43 (1.28)	2.09 (1.34)	9.20**
74	I make friendship easily	3.93 (1.00)	3.50 (1.19)	3.57**
79*	I don't accept my mistake in group	3.00 (1.42)	1.94 (1.20)	7.24**

**- significant at 0.01 level; *- indicates negative statements.

values of factor loading ranged from 0.35 to 0.62 which were found to be significant at 0.01 level of significance. Hence all the items were included in the scale (Table 9).

St. No.	Statement	Self-esteem	Emotional health	Factor loading
	Table 9 : Factor loading with varimax rotation and Coefficient of correlation between each item of self-esteem to its component and also with the scale			
5	I convince people to accept my opinion	0.418**	0.308**	.624
10	I get support of members to lead a group	0.500**	0.415**	.590
15	I bring group discussion to a common decision	0.569**	0.450**	.569
20	I motivate another person to work	0.360**	0.199*	.554
25	I am able to settle disagreement between friends	0.385**	0.316**	.500
30	I instruct my friends how work should be done	0.429**	0.312**	.497
35	I present my view in such a way that people get impressed	0.590**	0.395**	.492
40	I change plan of my friends to suit me	0.495**	0.421**	.453
45	I make others to understand their responsibilities	0.554**	0.517**	.429
50	I am able to encourage others to face problem	0.453**	0.376**	.390
55	I prepare friends to participate in team activity	0.624**	0.540**	.385
60*	I find it difficult to contribute acceptable idea in discussion	0.390**	0.377**	.360
65*	I find difficulty to establish rapport with others	0.379**	0.408**	.359
70*	My friends neglect me	0.495**	0.385**	.356
75	My friends ask for my view to solve their problem	0.492**	0.385**	.354
80*	I feel I am useless	0.469**	0.551**	.352

**- significant at 0.01 level; *- indicates negative statements

Selection of item by criterion groups' t-test:

The results in Table 10 explicated criterion group t-value which ranged between 1.96 and 6.72 and each item was significant at least at 0.05 level. Therefore all 16 items were retained for self-esteem dimension of EH-scale (Table 10).

Inter correlations among the subscales of the emotional health scale:

The inter correlations (Table 11) among different dimensions of the scale have been found to be significantly high. The obtained correlation values indicate high construct validity of the scale. The coefficient of correlation between the dimensions of emotional health scale ranged between 0.35 and 0.89 which indicate the uni-dimensionality of the scale (Table 11).

Reliability :

The reliability of the scale was established by split-half method and test-retest method (Table 12). The split-half reliability was calculated by using Spearman-Brown formula for the inventory and was 0.844 and was significant at 0.01 level.

The test-retest reliability for the scale was done after the interval of 95 days of first administration of the scale. The coefficient of correlation of test-retest reliability was 0.456 and was significant at 0.05 level (Table 12).

Table 10 : Criterion groups't-value of each item of self-esteem

St. No.	Statement	Group 1 (n=29)	Group 2 (n=29)	t-value
5	I convince people to accept my opinion	3.93 (0.79)	3.20 (1.04)	2.95**
10	I get support of members to lead a group	4.37 (0.86)	3.44 (1.15)	3.48**
15	I bring group discussion to a common decision	4.17 (0.92)	3.03 (0.98)	4.53**
20	I motivate another person to work	3.58 (1.23)	3.03 (0.86)	1.96
25	I am able to settle disagreement between friends	4.31 (1.10)	3.55 (0.98)	2.75**
30	I instruct my friends how work should be done	3.75 (0.91)	3.17 (0.88)	2.47*
35	I present my view in such a way that people get impressed	4.17 (0.80)	3.03 (1.37)	3.84**
40	I change plan of my friends to suit me	4.06 (1.19)	3.17 (0.92)	3.19**
45	I make others to understand their responsibilities	4.37 (0.72)	3.31 (0.89)	5.00**
50	I am able to encourage others to face problem	4.55 (0.78)	3.72 (0.88)	3.77**
55	I prepare friends to participate in team activity	4.34 (0.76)	3.00 (1.10)	6.39**
60*	I find it difficult to contribute acceptable idea in discussion	3.86 (1.12)	2.79 (1.23)	3.44**
65*	I find difficulty to establish rapport with others	4.55 (0.68)	3.31 (1.16)	4.93**
70*	My friends neglect me	3.86 (1.21)	2.76 (0.60)	3.99*
75	My friends ask for my view to solve their problem	3.86 (0.74)	3.03 (0.90)	3.80**
80*	I feel I am useless	4.27 (0.96)	2.37 (1.17)	6.72**

**- significant at 0.01 level; *- indicates negative statements

Table 11 : Inter dimension homogeneity

Sub-scales	SA	EM	SC	SR	SE
SA	-				
EM	0.684**				
SC	0.686**	0.395**			
SR	0.471**	0.355**	0.410**		
SE	0.654**	0.578**	0.579**	0.510**	
EH	0.891**	0.784**	0.775**	0.659**	0.841**

SA-Self awareness; EM-Emotional management, SC-Self-confidence,
SR-Social relations, SE-Self-esteem, EH-Emotional health, **p<0.01

Content validity :

In the present study an attempt was made to develop the "Emotional Health Scale" by

Table 12 : Test-retest correlations associated with the emotional health scale at 1 month and 4 months time intervals

Components	1 month (n=25)	4 months (n=20)
Total emotional health	0.84**	0.75**
Self-awareness	0.80**	0.70**
Emotional management	0.78**	0.65**
Self-confidence	0.80**	0.68**
Social relations	0.75**	0.64**
Self-esteem	0.79**	0.65**
Average	0.78**	0.66**

behavioral perspective. Each dimension is expressed in behavioral statements. The dimensions were self-awareness, emotional management, self-confidence, social relations and self-esteem. Each dimension was expressed in 16 behavioral statements. Each behavioral statement was judged by 97 experts. The judges were requested first to read each statement and then to evaluate it on three alternative answers *viz.,* irrelevant, relevant and most relevant. The level of relevancy of each statement and percentage of each statement confirm the content validity of the scale.

The degree of relevancy of each statement was calculated and it was between 47 and 92. On the basis of highest degree of relevancy, out of 150 statements, 80 were selected. The degree of relevancy of each of the selected statements was between 74 and 92. The selected statements were administered on a purposively selected sample of 109 B.Sc-I (Agriculture) to identify the differential behavioral expression in criterion group.

Internal validity :

The data of 80 statements of 109 1st B.Sc. (Agriculture) students were subjected to analysis of coefficient of correlation between item and the scale. The results of Table 2, 3, 5, 7, 9 and 11 proved that the 80 statements were having significant relation with the item and the scale. So the scale of emotional health consisting of 80 statements was having significant correlation, which means that each item was having internal validity with its components and the overall scale.

Discriminative validity :

The data of 109 B.Sc-I (Agriculture) students on 80 items was subjected to the criterion groups t-value analysis (Tables 1, 4, 6, 8 and 10). The results confirmed that 80 items had discriminative potentiality. It means that each item discriminates between the groups of individuals who had developed emotional health to the maximum level and also who had developed emotional health to the minimum level. Hence, the scale had discriminative validity.

In the present scenario, most of the scales are not age and culture appropriate. Here, an attempt is made to develop emotional health scale specifically for the emerging adults from behavioral perspective.

Implications :

As the first empirical study to investigate emotional health proposed herein, there is a need for future studies to replicate and expand the emotional health scale's psychometric validity and predictive utility.

The present study has implications for applied psychological practice with adolescents, particularly in the schools and colleges. Findings from the suggest that school-based practitioners and counsellors could use the Emotional Health Scale (EHS) as a psychometrically sound, developmentally appropriate instrument for measuring the core building blocks of emotional health. For example, for practitioners, EHS could be used as part of the individual psycho-educational assessment and treatment-planning processes, to obtain a baseline measure of students' emotional health that helps inform subsequent interventions and supports.

The EHS might also be used within group counselling settings, as an assessment tool for progress-monitoring the growth of students' emotional health in response to intervention. Also, at the school wide level, the EHS might be used as a universal screening instrument for assessing students' emotional health.

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