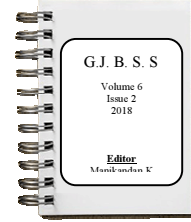




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Development and standardization of Psychological Hardiness Scale

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Abstract

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Psychological hardiness, a personality construct that helps to insulate individuals from the effects of stress has attracted research attention during the last 40 years. Unfortunately the measurement of this disposition has not developed enough to use in our culture. Since there is no instrument available for psychological hardiness in Malayalam language, it is decided to develop an indigenous scale in Malayalam. This scale was intended to measure Psychological Hardiness of adolescents. The scale is a five points 'Likert' type anchors with 42 statements for factor determination with sample of 250 higher secondary students. The final scale consists of 22 items. Exploratory factor analysis was done and it yielded a single factor. Reliability and validity of the scale were found to be satisfactory.

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The conceptualization of hardiness as a source of resistance to the negative effects of stressful life events on health derives from existential personality theory of Kobasa and Maddi (1977). Psychological hardiness helps individuals to cope with the stress and predict future well being, questions across contexts and its influence on outcomes other than health. Hardy persons are more likely to monitor and intentionally adjust their reactions when given the chance to prolong or avoid further exposure to an unpleasant experience. According to Kobasa (1979) "Hardiness is a personality dimension that is believed to confer resistance against the effects of psychological stress". Westman (1990) defines "Hardiness operates as a stress buffer as direct influence on health, so hardiness is usually conceptualized as a cognitive personality variable consisting of a sense of commitment, control and challenge".

It is suggested that hardiness acts as a protective factor in stressful situations predominantly through cognitive appraisal and coping behaviors. Persons high on hardiness approach the life demands actively and perceive that they can handle them successfully, view them as meaningful and useful, which results in less stressful experience (Maddi, 1990). Protective function of hardiness could be seen in its impact on the choice of the situations that one will be involved with. Namely, the effects of hardiness on cognitive appraisal and coping efforts refer only to the individual differences in the reactions to actual stressful situations. However, hardiness does not influence only the appraisal of actual stressful situations, but also the evaluation of past experience, the appraisal of costs and benefits of various behaviors, and therefore, the choice of important, meaningful and challenging situations. Thus, hardiness does not influence only the reactions to the stressful stimuli, but can also lead to qualitatively different experiences (Wiebe & Williams, 1992).

Maddi (1990) has characterized hardiness as a combination of three attitudes (commitment, control, and challenge) that together provide the courage and motivation needed to turn stressful circumstances from potential calamities into opportunities for personal growth.

Commitment: Commitment refers to the tendency to involve oneself in the activities in life and have a genuine interest in and curiosity about the activities, things and other people. People who are high in commitment feel like they are part of a larger purpose. They are therefore able



to find meaning in their work, are fully involved in what they are doing and they give it their best effort. In this context, problems are more likely to be experienced as minor setbacks in the larger scheme of things, rather than major roadblocks to the work at hand.

Control: Dimension of control is defined as a tendency to believe and act as if one can influence the life events through one's own effort. In a tough situation hardy individual do not become overwhelmed or helpless. Instead, they strive to gain control of what they can by going into action. While acknowledging it is true that many aspects of a crisis situation cannot be controlled, they also understand that by intentionally developing and holding onto a positive, optimistic, hopeful outlook, one can always determine his reaction to any predicament he face.

Challenge: This sub facet of hardiness is beneficial because it contributes to one's ability to be flexible and to adapt to potentially stressful situations. Challenge refers to the belief that changes in life are opportunities for personal growth. How one view a problem is important. Psychologically hardy individuals see problems as challenges rather than threats. Hardy people see problems as challenge and rather than being overwhelmed and seeking to retreat, they get busy looking for solutions. Seeing a problem as a challenge mobilizes our resources to deal with it and encourages us to pursue the possibilities of a successful outcome.

Adopting the three attitudes of hardiness (commitment, control, challenge) has been shown in research to enhance performance and health even in the face of stressful life changes. Hardiness is also being used by the American Psychological Association (APA) to help children, teenagers and adults to adapt well to adversity, trauma, tragedy, threats and other significant sources of stress. Given evidence that psychological hardiness helps insulate individuals and undergraduates from the effects of stress and predicts future wellbeing, questions naturally arise regarding its generalizability and its influence on outcomes across other contexts (Cole et al., 2004). Hardiness leads to excellence in performance, and enhanced physical and mental health. Building on this, research has begun which attempts to compare the relative power of hardiness and other proposed components of positive psychology on performance and health. Self-confidence is the belief in one's ability to succeed. Generally human beings are born with innate capacity to perform any activities successfully. In olden days people are confident and approach the things/process without any hesitation. Due to many environmental as well as socio-technological developments and change brought many limitations and necessitated the understanding of psychological belief about one's own ability. Self-confident people know they have certain skills and qualities, but they don't boast on it. Usually people who brag are trying to hide their poor self-confidence. Self-confident people are very happy to give credit to others if the groups they belong accomplish something.

What constitutes the "self" was a hot subject among philosophers and great teachers, religious leaders etc., for many years. The self of a person is the sum total of his thoughts, feeling and emotions, concerns, imagination, hopes etc. Behavioral scientists approached this as a construct and identified a number of self constructs like self-esteem, self-efficacy, Self-confidence, and self-concept. According to Neill (2015) Self-Esteem refers to general feelings of self worth or self value, Self-efficacy is the belief in one's capacity to succeed at tasks, Self-confidence refers to belief in one's personal worth and likelihood of succeeding, Self-concept is the nature and organization of beliefs about one's self. According to Basavanna (1975), self-confidence refers to an individual's perceived ability to act effectively in a situation to overcome obstacles and to get things go all right.

Development and Planning of the Scale

Psychological hardiness is now receiving increasing interest from a variety of professionals due to its potential influence on health, well-being and quality of life and how people respond to various challenges of life. However the complexity of defining the construct of hardiness has been widely recognized. Although some attempts have been made to develop

culturally valid frameworks for the study of psychological hardiness the applicability of the construct of psychological hardiness developed in Western culture to Indian culture is a critical issue. Provided that most of the psychological hardiness scales were constructed by the Western authors and represent their own cultural ideas and norms of psychological hardiness, these scales do not represent the norms adhered by Indian culture.

Western societies are highly individualistic in which personal goals and needs are preferred over the concern for others and emphasis is mostly laid on me. In addition to cultural disparities the scales developed by the Western authors are mostly in English language. While searching an instrument to measure psychological hardiness in vernacular language-Malayalam absolutely no standardized psychological instrument is available for Malayalam speaking people. The present study was designed to develop a unidimensional valid and reliable indigenous psychological hardiness scale.

Preparation of Items

After extensive review of available literature, the item pool of statements covering three components of hardiness that is commitment, control, and challenge were prepared. Items related to each component were written, thus a total of 42 items were written. Every item has been provided 5 response categories, namely strongly agree, agree, neutral, disagree, and strongly disagree. The entire set of 42 items was submitted to a group of judges including college teachers and psychologists with a request to suggest any vagueness, ambiguity, or dual meaning coming from any item. Since it is in regional language (Malayalam) the draft scale was given to language experts for verifying the structure, appropriateness and quality of each item.

Try Out

The prepared draft scale was administered a group of adolescents to know how will be the individuals receive, perceive, interpret, and respond each item or any difficulty in responding to the items in the scale. There were 40 adolescents participated in the try out. Almost all respondents reported that they have no difficulty in understanding the meaning of the statements, marking the responses, etc. Then all the items in the draft scale kept as such in the scale.

Method

Participants

Participants for the study consist of 250 students with age ranges from 14 to 19 years. Among them 113 were males and 137 were females. All participants belong to Kerala, and speak Malayalam language.

Instruments

1. Psychological Hardiness Scale: Psychological hardiness scale consists of 42 items in Malayalam language. Instructions were clearly printed on the top of the scale and subjects will take below 15 minutes to respond the statements. All positive items would be given a score of 5, 4, 3, 2, 1, and all negative items would be given a score of 1, 2, 3, 4 and 5. Subsequently, the scores earned by the teste on each item are added to get a total Psychological Hardiness score.
2. Personal data sheet: Personal data sheet was used to collect information like sex, age, religion, family size, and birth order, etc.

Procedure

After the subjects were seated comfortably, investigator explained the purpose, objectives, and relevance of the study and solicited their whole hearted cooperation for the study. The subjects were also asked to fill up the consent form and demographic data sheet to provide information such as class, sex, age etc. printed on the front page of the scale. To ensure accuracy in responding, the researcher read them loudly and subjects read them silently. After



that their difficulties were asked and solved they were requested to start responding. The language used by the researcher was as simple as possible so that each one understands what was required. The researcher told the subjects that no time limit was imposed. Ordinarily not more than 15 minutes were required for all individuals to complete the scale. After completion, it was collected back and checked for omission. Then both instruments were scored, coded as per the previously prepared scoring key and entered into a spreadsheet for further statistical analysis.

Results and Discussion

The objective of the study was to develop and standardize a valid measure for psychological hardiness. Researchers are having different opinion in selecting a valid item from a pool of items. Here the investigator has used classical test theory for selecting the items and established its psychometric properties.

Item Analysis

Item analysis is a technique used for selecting and rejecting an item in the scale on the basis of their difficulty value and discriminative power. The responses of all subjects in each item were entered into a spread sheet and loaded into statistical software. There are many methods available for items selection. Here the investigator decided to calculate the corrected item-total correlation (Point Biserial Correlation), and discriminating power of each items in the scale. The criterion for including an item in the scale was if an item achieve corrected item-total correlation of .25 or above (Seema, n.d), discriminating power greater than 2.58 (t value) as proposed by Edwards (1956) will be include in the final scale. The details of the computations are presented in table 1.



Table 1
Mean Sd, and 't' values of items in the Psychological Hardiness Scale

Item	Group	Mean	SD	't' value	Item	Group	Mean	SD	't' value	Item	Group	Mean	SD	't' value
Item 1	Low	3.97	0.930	5.44	Item 15	Low	2.99	1.215	4.35	Item29	Low	3.53	1.058	6.48
	High	4.68	0.531			High	3.85	1.110			High	4.54	0.742	
Item 2	Low	2.78	1.268	4.03	Item 16	Low	3.90	1.340	3.14	Item30	Low	2.50	1.126	9.47
	High	3.65	1.243			High	4.54	1.043			High	4.18	0.929	
Item 3	Low	3.71	1.023	7.73	Item 17	Low	3.93	0.798	3.32	Item31	Low	3.56	1.250	6.72
	High	4.78	0.514			High	4.44	.998			High	4.69	0.605	
Item 4	Low	3.43	0.997	7.37	Item 18	Low	3.85	1.273	0.57*	Item32	Low	3.22	1.402	4.52
	High	4.47	0.610			High	3.72	1.434			High	4.24	1.211	
Item 5	Low	3.25	1.028	4.73	Item 19	Low	3.78	1.049	4.28	Item33	Low	4.19	0.868	2.95
	High	4.13	1.145			High	4.47	0.819			High	4.60	0.756	
Item 6	Low	3.34	1.229	5.26	Item 20	Low	3.79	1.127	6.05	Item34	Low	3.38	1.051	5.68
	High	4.32	0.937			High	4.72	0.569			High	4.28	0.770	
Item 7	Low	4.13	1.035	5.07	Item 21	Low	2.65	1.194	5.87	Item35	Low	3.51	1.152	7.12
	High	4.91	0.448			High	3.87	1.233			High	4.66	0.660	
Item 8	Low	4.21	1.030	4.78	Item 22	Low	3.44	1.070	7.61	Item36	Low	3.72	1.091	3.89
	High	4.85	0.432			High	4.54	0.531			High	4.40	0.933	
Item 9	Low	3.32	1.177	7.29	Item 23	Low	4.07	0.798	4.30	Item37	Low	4.24	0.831	5.53
	High	4.49	0.586			High	4.62	0.670			High	4.85	0.396	
Item 10	Low	4.03	1.022	5.60	Item 24	Low	3.19	1.096	7.12	Item38	Low	3.82	1.245	3.18
	High	4.78	0.418			High	4.37	0.809			High	4.46	1.071	
Item 11	Low	3.90	1.095	4.55	Item 25	Low	4.31	1.055	4.51	Item39	Low	3.26	1.115	8.06
	High	4.62	0.713			High	4.93	0.398			High	4.60	0.794	
Item 12	Low	3.57	1.331	4.41	Item 26	Low	3.96	0.999	6.40	Item40	Low	3.76	0.964	8.42
	High	4.40	0.775			High	4.79	0.407			High	4.82	0.384	
Item 13	Low	4.01	1.275	4.29	Item 27	Low	3.00	1.159	7.43	Item41	Low	3.09	1.089	4.03
	High	4.76	0.672			High	4.25	0.760			High	3.88	1.204	
Item 14	Low	3.56	1.238	1.89*	Item 28	Low	3.21	1.127	7.06	Item42	Low	3.35	1.062	6.67
	High	3.96	1.215			High	4.32	0.657			High	4.40	0.736	

*Items which are deleted from the final scale



From table 1, it can be seen that except two items (item no.14 & 18) all other 't' values were above 2.58 ($p < .01$). Since item no.14 and 18 were not satisfied the condition, they were deleted from the draft scale. Out of 42 items, 40 items in the psychological hardiness scale significantly discriminate the low and high scores in the psychological hardiness scale.

The second criteria of the item selection set was, an item which score an item total correlation of .25 or above will be included in the scale. Hence the investigator has calculated the corrected item total correlation of each item and the results are presented in table 2.

Table 2

Item statistics of item in the Psychological hardiness scale

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
Item 1	165.21	230.206	.311	Item 22	165.50	225.343	.425
Item 2	166.42	232.092	.102*	Item 23	165.25	231.697	.254
Item3	165.22	224.705	.473	Item 24	165.72	225.471	.363
Item4	165.55	225.630	.387	Item 25	164.86	229.631	.382
Item 5	165.80	228.994	.243	Item 26	165.18	227.532	.398
Item 6	165.69	224.632	.368	Item 27	165.91	224.378	.382
Item 7	164.93	226.449	.513	Item 28	165.81	226.204	.351
Item 8	165.00	230.554	.278	Item 29	165.54	226.314	.363
Item 9	165.74	222.593	.455	Item 30	166.12	220.352	.429
Item 10	165.20	229.116	.304	Item 31	165.36	224.905	.402
Item 11	165.25	227.579	.323	Item 32	165.82	226.429	.240
Item 12	165.58	227.617	.277	Item 33	165.19	232.092	.184*
Item 13	165.18	227.811	.270	Item 34	165.78	226.560	.368
Item 14	165.86	235.210	.032*	Item 35	165.46	225.390	.372
Item 15	166.34	229.849	.176*	Item 36	165.50	229.488	.254
Item 16	165.23	228.185	.264	Item 37	164.99	229.365	.378
Item 17	165.42	233.055	.154*	Item 38	165.42	232.382	.125*
Item 18	165.68	239.269	-.070*	Item 39	165.78	224.949	.324
Item 19	165.34	227.351	.377	Item 40	165.30	225.938	.432
Item 20	165.22	226.351	.399	Item 41	166.17	231.284	.140*
Item 21	166.39	225.709	.258	Item 42	165.66	225.053	.406

**Items which are deleted from the final scale*

When the item total correlations were scrutinized, items 2, 14, 15, 17, 18, 33, 38, and 41 were found to have correlation below .25. As mentioned earlier those items which are not satisfied the criteria, hence the items 2, 14, 15, 17, 18, 33, 38, and 41 were also deleted from the final scale. Then the scale consists of 34 items.

How these 34 items in the scale account variance in psychological hardiness, exploratory factor analysis with varimax rotation was performed and the results are presented in table 3.

Table 3
Exploratory Factor Analysis of Psychological hardiness Scale

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.341	18.651	18.651	6.341	18.651	18.651
2	2.085	6.134	24.784			
3	1.737	5.109	29.893			
4	1.563	4.598	34.491			
5	1.509	4.439	38.930			
6	1.392	4.095	43.025			
7	1.251	3.678	46.703			
8	1.187	3.492	50.195			
9	1.167	3.432	53.628			
10	1.061	3.121	56.749			
11	1.006	2.959	59.708			
12	.960	2.822	62.530			
13	.905	2.663	65.193			
14	.890	2.616	67.809			
15	.822	2.418	70.227			
16	.787	2.315	72.542			
17	.775	2.280	74.822			
18	.712	2.093	76.915			
19	.665	1.956	78.871			
20	.644	1.893	80.764			
21	.613	1.804	82.568			
22	.611	1.798	84.366			
23	.591	1.739	86.105			
24	.564	1.659	87.765			
25	.529	1.556	89.321			
26	.504	1.482	90.803			
27	.477	1.403	92.206			
28	.465	1.366	93.573			
29	.433	1.274	94.847			
30	.395	1.163	96.009			
31	.381	1.120	97.130			
32	.343	1.008	98.137			
33	.321	.945	99.082			
34	.312	.918	100.000			

From table 3, it can be seen that the single factor extraction method yielded one factor with a variance of 18.651. The result of varimax rotation given in table 3 revealed that items are clustered in a single component (factors) and the set criterion for selecting an item, that is those items which have a factor loading .40 or above will be

included in the scale (Field, 2005). Table 4 provides the factor loading of each item in a single factor.

Table 4

Rotated component matrix-Psychological hardiness

Items	Component
	1
Item7	.620
Item 9	.552
Item 3	.550
Item 22	.546
Item 27	.514
Item 30	.507
Item 40	.502
Item 19	.486
Item 42	.485
Item 26	.480
Item 34	.474
Item 31	.470
Item 25	.468
Item 4	.461
Item 6	.460
Item 20	.460
Item 29	.458
Item 24	.438
Item 37	.431
Item 1	.426
Item 11	.421
Item 35	.415
Item 28	.409
Item 10	.368
Item 12	.341
Item 39	.314
Item 36	.310
Item 16	.301
Item 23	.301
Item 13	.293
Item 8	.287
Item 5	.275
Item 21	.263
Item 32	.222

The results of varimax rotation of psychological hardiness scale revealed that 11 items i.e., (see table 4) items 10, 12, 39, 36, 16, 23, 13, 8, 5, 21, and 32 have not satisfied the set criteria (factor loading .25 or above). There for, once again exploratory factor analysis was executed by deleting these 11 items to know the changes in the cumulative percentage of the factor and to extract items with loading more than .40. The results are presented in table 5.

Table 5
Exploratory factor analysis (EFA) of Psychological hardiness

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.521	24.005	24.005	5.521	24.005	24.005
2	1.823	7.926	31.931			
3	1.494	6.496	38.427			
4	1.311	5.699	44.126			
5	1.149	4.995	49.120			
6	1.085	4.718	53.839			
7	.985	4.284	58.123			
8	.850	3.695	61.818			
9	.834	3.627	65.445			
10	.798	3.470	68.914			
11	.787	3.422	72.336			
12	.734	3.189	75.525			
13	.679	2.951	78.476			
14	.642	2.789	81.265			
15	.599	2.603	83.868			
16	.575	2.501	86.369			
17	.540	2.347	88.716			
18	.490	2.131	90.847			
19	.488	2.121	92.967			
20	.467	2.031	94.998			
21	.408	1.776	96.774			
22	.389	1.692	98.466			
23	.353	1.534	100.00			

Exploratory factor analysis of 23 items revealed a change in the cumulative percentage and one item was found have factor loading below .40 (see table 6).

Table 6
Rotated component matrix-Psychological hardiness

Items	Component
	1
Item 7	.625
Item 9	.569
Item 3	.555
Item 27	.552
Item 22	.528
Item 40	.521
Item 30	.493
Item 19	.490
Item 42	.490
Item 29	.489
Item 34	.485
Item 31	.484
Item 25	.473

Items	Component
Item 1	.460
Item 26	.459
Item 4	.458
Item 20	.451
Item 6	.443
Item 24	.440
Item 28	.434
Item 11	.429
Item 37	.417
Item 35	.390

Result of varimax rotation revealed that one item having factor loading below .40. To know what will be the factor structure of psychological hardiness, if item 35 deleted from the equation, again same procedure was done and the results are presented in table 7.

Table 7

Exploratory Factor Analysis

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.394	24.516	24.516	5.394	24.516	24.516
2	1.784	8.110	32.626			
3	1.490	6.772	39.398			
4	1.309	5.950	45.347			
5	1.093	4.970	50.318			
6	1.035	4.706	55.024			
7	.983	4.468	59.492			
8	.835	3.796	63.288			
9	.805	3.660	66.948			
10	.787	3.579	70.526			
11	.742	3.371	73.897			
12	.681	3.094	76.991			
13	.655	2.979	79.970			
14	.640	2.907	82.877			
15	.580	2.638	85.515			
16	.540	2.454	87.969			
17	.505	2.293	90.262			
18	.490	2.228	92.490			
19	.467	2.124	94.613			
20	.438	1.992	96.605			
21	.389	1.770	98.375			
22	.357	1.625	100.00			

The exploratory factor analysis revealed that the variance accounted by all the items for the factor was 24.516 with Eigen value of 5.394.

Table 8
Rotated component matrix-Psychological hardiness

Items	Component
	1
Item 7	.624
Item 9	.573
Item 27	.566
Item 3	.552
Item 22	.549
Item 40	.529
Item 30	.514
Item 29	.500
Item 19	.497
Item 34	.494
Item 42	.490
Item 31	.488
Item 25	.473
Item 4	.456
Item 1	.455
Item 26	.453
Item 20	.447
Item 28	.445
Item 6	.443
Item 11	.431
Item 24	.429
Item 37	.423

Table 8, the component matrix showed that entire 22 item satisfied the criteria. Since the scrutiny of the meaning and nature of the items loaded under a single factor, it is decided to keep this uni-factor model in measuring psychological hardiness of the adolescents.

Reordering of the items

In the draft scale there were 42 items. Since many of the initial items were dropped from the scale after item analysis and factor analysis, only about half of the initial items were retained in the final scale. Therefore it was decided to reorder the serial number of the items along with its descriptive statistics. The details are given in table 9.

Table 9

Initial item number, Final item number and descriptive statistics of each item in the psychological hardiness scale

Old Number	New number	Minimum	Maximum	Mean	S. D	Variance
Item 1	1	1	5	4.37	.782	.611
Item 3	2	1	5	4.35	.894	.799
Item 4	3	1	5	4.03	.996	.991
Item 6	4	1	5	3.88	1.115	1.244
Item 7	5	1	5	4.64	.726	.527
Item 9	6	1	5	3.87	.889	.998
Item 11	7	1	5	4.32	.987	.975
Item 19	8	1	5	4.23	.884	.781
Item 20	9	1	5	4.35	.916	.839
Item 22	10	1	5	4.07	.937	.878
Item 24	11	1	5	3.86	1.062	1.128
Item 25	12	1	5	4.72	.697	.485
Item 26	13	1	5	4.39	.830	.689
Item 27	14	1	5	3.66	1.101	1.212
Item 28	15	1	5	3.77	1.035	1.070
Item 29	16	1	5	4.04	.995	.991
Item 30	17	1	5	3.46	1.274	1.623
Item 31	18	1	5	4.22	1.016	1.032
Item 34	19	1	5	3.80	.965	.932
Item 37	20	1	5	4.58	.725	.525
Item 40	21	1	5	4.28	.883	.779
Item 42	22	1	5	3.92	.996	.993

Reliability and Validity

Reliability of the total scale was estimated by calculating Cronbach Alpha and found to be .839. Test-retest reliability was found to be .97. External validity of the scale was estimated by correlating scores in PsyCap scale.

Scoring procedure

Each item has a response option on Likert[®] 5 points continuum viz, Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree with respective weight of 5, 4, 3, 2 and 1 for the favourable statements. All items are in positive dimensions. Hardiness score of the subject is the sum total of all item scores. The range of scores is from 22 to 110, high scores reflecting relatively higher level of Hardiness.

Norms

The norms of any particular group are defined by the group itself. Norms are the accepted standards of behavior for any given group. Norms for the Psychological hardiness scale for the total sample (table 6) was developed.

Table 6
Percentile norms for total sample

Percentile Rank	Score
5	73.00
10	77.00
15	81.00
20	83.20
25	85.00
30	87.00
35	88.00
40	90.00
45	91.00
50	92.00
55	94.00
60	94.00
65	96.00
70	97.00
75	98.00
80	99.00
85	101.00
90	103.00
95	104.45

Conclusion

The objective of this study is to construct and standardize psychological hardiness scale in Malayalam language. Theoretically, hardiness is conceptualized as a general personality dimension consisting of three interrelated components. However, research on the structure of hardiness, did not give clear answers about its dimensionality. Some research suggested that hardiness is a unidimensional construct while others indicated that it is multidimensional, i.e. consisting of three factors (Maddi, 1999). In this study, the researcher could extract a single factor, hence psychological hardiness is conceptualized as a unidimensional construct. The final Psychological hardiness scale included single factor with 22 items. The test retest reliability and external validity of the scale were established.

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