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The self-reliance scale: development and validation

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Abstract: The objectives of this study are to – develop a self-report scale to measure self-reliance, evaluate its main structure, and study psychometric properties in the developed scale. The complete process of developing and validating the scale consociates three phase: phase I – writing of items and content validation, phase II – factor analysis, and phase III – testing reliability and validity. The study included 2,210 participants. An exploratory factor analysis was run using IBM SPSS 23. An exploratory factor analysis with oblique rotation of the intercorrelations of the 30 items resulted in a 4-factor solution: self-efficacy, external dependence, autonomy and self-confidence deficit. Cronbach's alpha index of internal reliability was used to evaluate the psychometric properties of the self-reliance scale. As the scale measures different aspects of the important variable of self-reliance, the applicability of the instrument will be vast and remarkable.

Keywords: self-reliance scale; self-regulation; scale development; EFA; validation.

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1 Introduction

India's Prime Minister, Shri Narendra Modi, has given a national call for *Atmanirbhar Bharat* (self-reliant India). This self-reliance slogan on all media platforms emphasises the economic aspect of self-reliance. However, this is not the exact meaning of self-reliance. When a person is self-reliant, he/she can trust himself/herself to decide in their best interest, honour one's goals, and create healthy boundaries in order to ensure their own well-being. The current study focuses on the development of a self-reliance scale intending to include all aspects of an individual's life.

Ralph Waldo Emerson (1841) coined the term 'self-reliance' which focused on the belief in one's own capabilities, originality, skills, trust in one's present thoughts, and living from within. "You do what you believe is right, rather than going with what society thinks". Baumeister (1987) defines self-reliance as "reliance on internal resources to provide life with coherence (meaning) and fulfillment". It refers to being reliant on one's own powers and possessions rather than those of others. Self-reliance can be defined as the ability to rely on one's self and capabilities to meet one's personal needs and deal with the challenges in life without depending on others. It has been theorised as a preference to solve emotional problems on one's own (Ortega and Alegría, 2002). According to Vergunst (2002), self-reliance is the ability to rely on oneself, and has been framed in a positive light in relation to autonomy. Another definition given by Choo and Marszalek (2019), self-reliance can be defined as an individual's tendency to believe in one's own problem-solving capacity and to not seek others help. Here, self-reliance is defined as the belief in one's own ability to accomplish a task independently without external support.

Self-reliant youth seem to be well aware of their own influence on their life course and hence may be more motivated to engage in behaviours to improve their lives rather than blame others for problems (Lenkens et al., 2020). Self-reliance is preferred optimally in situations involving academic performance, social adjustment as well as personal well-being (Snyder, 2017). Being self-reliant also means that one can listen to others' advice, but ultimately take one's own decision regarding a situation and be strong enough to face the situation (Schaumberg and Flynn, 2017). The more we are self-reliant, the more certain we become of our own abilities (Schaumberg and Flynn, 2017). Being self-reliant is presented to be the ability to take control over our life and thus, an important life goal. It helps an individual become empowered, reach their full potential,

discover an inner peace, develop strength, happier relationships and most importantly, cultivate a strong character (Schaumberg and Flynn, 2017).

Though self-reliance is a century old concept coined by people yet no specific scale is there to measure it in the general population. The self-reliance achievement scale (SRAS) (Ulstad et al., 2008) tracks the growth of low-income Minnesota Community Action Agency clients and their families on 15 aspects. It measures the progress of low-income people on self-reliance and stability which are closely related to economic stability. Another scale 'self-reliance index' is used as a needs assessment tool to understand the factors that are helpful in improving the health outcomes of refugees and their families (Leeson et al., 2020).

Further, the Behaviour Assessment System for Children (BASC-3) (Sandoval and Echandia, 1994) uses the Self-Reliance Scale (SRS), a research instrument as part of its assessment. The tool helps in identifying the requirement of additional support for school-age children (3 to 18 years) pertaining to their emotional and behavioural functioning.

The existing measuring tools of self-reliance appear to have shortcomings as they measure self-reliance in specific populations (youth, refugees, children) only and seem to assess merely the specific aspects of self-reliance viz. economic/income stability, health outcomes or need of additional support. The lack of comprehensive measurement techniques to assess self-reliance in the adult population with a wide age range, gave rise to the development of this self-reliance scale.

The concept of self-reliance has received prominence because it is a distinctive indicator of individualistic societies, and its development is considered as essential for all sorts of human growth. Self-reliance acquires an added value in collectivistic societies like India because the disposition to be self-dependent in an affiliation-oriented culture is a strong indicator of development of the nation. While social support is a core strength of affiliation-oriented cultures like India, the individual's self- reliance not only indicates the confidence of one in using the support sparingly, but also the capability of providing support to others, in turn aiding in the development of sustainable countries and societies.

Previous research (Schaumberg and Flynn, 2017; Lenkens et al., 2020) has demonstrated the positive impact of self-reliance on various aspects of one's life. As self-reliance is gradually transforming into a global touchstone of strong nations, it becomes important to assess this construct in different populations and cultures. Taking into consideration the importance of this construct, the objectives of this study were to:

1 develop a self-report scale to assess self-reliance

2 evaluate its core structure

3 study various psychometric properties involved in the construction of this tool.

2 Tool development

2.1 Development and validation of the self-reliance scale

Three parts make up the entire process of creating and validating the scale. Item development and content validation are included in Phase I. Factor Analysis is taken into account in Phase II. Reliability and validity testing are part of Phase III.

2.1.1 Phase 1: item development and content validation

The purpose of this study was to create enough items to construct the scale's foundation. The first step was to review a huge amount of literature on self-reliance. Aside from that, the researchers' experiences were considered. As a result, the researchers grouped 44 elements together for quantitative evaluation. The collection of items was then transformed to a scale form and given to eight psychology professors for evaluation of content validity (Lawshe, 1975).

When more experts agree on the importance of a given item, according to Lawshe, there will be higher degrees of content validity. The content validity ratio (CVR) was formulated by Lawshe as: CVR = (Ne – N/2)/ (N/2). Ne refers to number of panel members showing the items 'essential' and N is the total number of members. The values of CVR between −1 (perfect disagreement) and +1 (perfect agreement).

The members were asked to read each of the items and decide whether that item was 'essential' to measure the self-reliance of the individual or 'not' with two alternatives (0 = no, 1 = yes). The CVR considered for each of the items was .75 and above, which was estimated based on the number of experts – 8 (Lawshe, 1975). Following the members' ratings, eight items were discarded, leaving '36' items for analysis. After taking into account the item total correlation, those items with correlations less than.30 were eliminated, resulting in the deletion of 6 items. As a result, the final version of the scale had 30 items.

2.1.2 Phase II: factor analysis of the self-reliance scale

Exploratory factor analysis (EFA) was performed to identify the factors selected to characterise the primary structure of the data after the standard procedure for scale development was completed. The goal of the study was to find out the people's level of self-reliance on a four-point scale (1 = disagree, 4 = agree), the 30 items were used to assess self-reliance, with high scores indicating a high level of self-reliance.

3 Participants

A total of 2210 participants [1,054 men and 1,023 women, 133 did not disclose their gender with age range 15–64 years (M = 25.86, SD = 9.35)] responded to these 30 statements. Factor analysis (with principal components extraction) was used to check if the 30 statements represent identifiable factors. The socio-demographic information was collected. In addition to that self-regulation and resilience scales were administered to all the participants for validation of the scale. The following inclusion and exclusion criteria were followed for the participants.

1 *Inclusion criteria*: Participants in the age group of 15–65 years enrolled in educational institutions, willing to sign informed consent/assent. In case of those under 18 years, where the parents are ready to sign the informed consent.

2 *Exclusion criteria*: Those either below 12 years or over 65 years were excluded. People either unwilling or not in a position to sign the informed consent form due to their mental state were excluded.

- *Self-regulation scale:* This scale was developed by Schwarzer et al. (1999) consisting of 10 items on a 4-point Likert Scale. The ratings were 1 – not at all to 4 – exactly true. Higher score indicates a higher level of self-regulation. The Cronbach's alpha level of the self-regulation scale was found to be 0.93.
- *Brief resilience scale (BRS):* This scale was developed by Smith et al. (2008) and consisted of 6 items responded to on a 5-point scale. The ratings were 1 – strongly disagree to 5 – strongly agree. Cronbach's alpha ranged between 0.80–0.91.

4 Procedure

The participants were informed about the study and this was followed by taking their consent and willingness to be a part of the study. Alternatively, an assent form was given to participants aged under 18 years. Subsequently, the scales were administered on them individually as well as in groups. They were asked to read the written instructions on the scales and were asked to fill-in their demographic details and responses. The obtained quantitative data were analysed using IBM SPSS Statistics 23.

5 Results

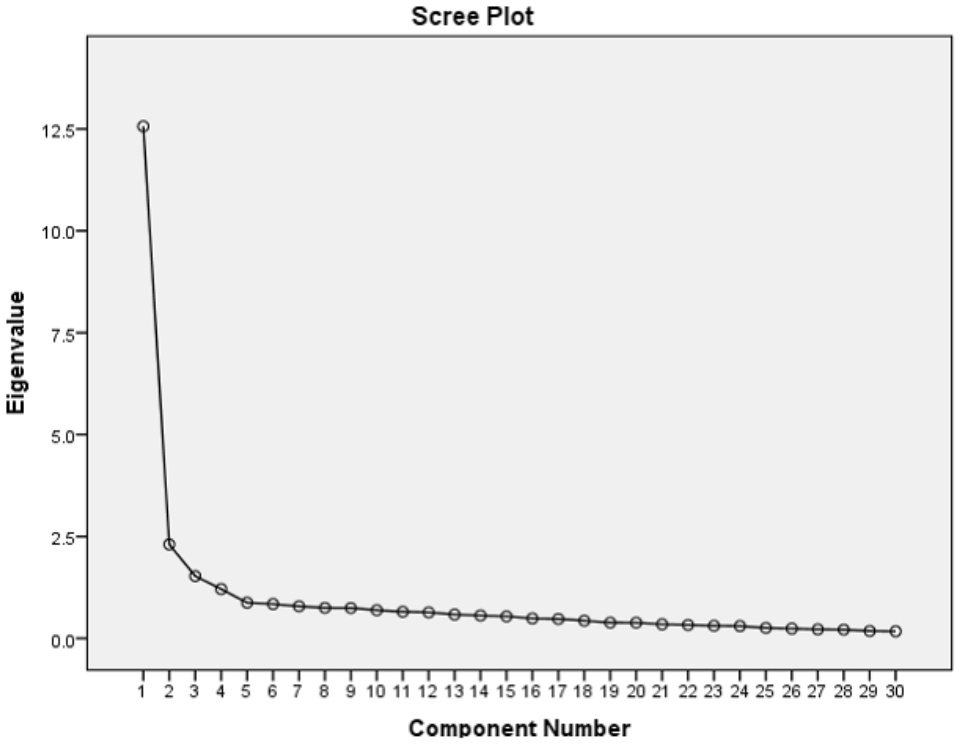
5.1 Exploratory factor analysis

The preliminary principal component analysis was employed with direct oblimin (oblique) rotation with Kaiser Normalisation, Eigen values >1 on 30 items. The value of KMO-MSA was 0.97, $\chi 2$ (435) = 40010.67, $p < 0.001$, thus indicating that the data were suitable for factor analysis (Kaiser, 1974). The communalities values ranged from 0.34 to 0.81. Two criteria were used to ascertain factor extraction, viz., the scree plot along with the Eigen value >1. The scree plot (Figure 1) and Eigen value >1 criterion gave rise to the extraction of four factors. The matrix communalities for all 30 items are presented in Table 1.

Table 1 Communalities for items of 30 item self-reliance scale

Items	*Extraction*	*Items*	*Extraction*	*Items*	*Extraction*	*Items*	*Extraction*
1	.694	9	.514	17	.657	25	.741
2	.741	10	.723	18	.585	26	.477
3	.457	11	.663	19	.517	27	.811
4	.606	12	.520	20	.565	28	.449
5	.558	13	.578	21	.441	29	.520
6	.650	14	.336	22	.683	30	.543
7	.537	15	.386	23	.791		
8	.481	16	.608	24	.777		

Figure 1 The factor extraction based on the scree plot



Note: The scree plot shows the plot of eigenvalues

5.2 Extraction: principal component analysis

Table 2 presents the means, standard deviations and inter-item correlation matrix of all 30 items on a four-point scale (1 = disagree to 4 = agree). The range of the means was 2.22 (Item 8) to 3.26 (Item 22). Examination of the correlation matrix (Table 2) reveals fairly high correlations between the 30 variables written to measure support for specific types of self-reliance. The correlation matrix also demonstrated that the majority of the correlation coefficients were nearly .30 or above. Given the number of high inter-correlations between the self-reliance specific variables, the hypothesised factor model appears to be suitable.

The criteria used to determine factor extraction were: the scree plot and Kaiser's Eigenvalue >1. The scree plot (Figure 1) and Kaiser's Eigenvalue >1 criterion gave rise to the extraction of four factors. From Table 3, it is noticed that the Factors 1, 2, 3, and 4 contributed 41.88%, 7.69%, 5.10%, and 4.04% variance, respectively. That is, 58.70% of the total variance is attributable to these four factors. The factor solution converged in 16 iterations within a simple structure. The correlation coefficients (r) between Factors ranged from .003 to .13. Each of the items loaded .41 or above on its expected factor. The Self-reliance scale items, pattern coefficients (factor loadings), in addition to the percentage of explained variance are presented in Table 3.

Table 2 Correlation matrix, means and standard deviations for the 30-item self-reliance scale

Items	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*
1	1																													
2	.765	1																												
3	.135	.130	1																											
4	.615	.561	.203	1																										
5	.366	.339	.175	.488	1																									
6	.611	.566	.202	.615	.550	1																								
7	–.046	–.061	–.103	.027	.119	.082	1																							
8	–.260	–.311	.151	–.051	–.088	–.151	–.003	1																						
9	–.226	–.277	.180	–.074	.000	–.101	–.020	.429	1																					
10	.689	.724	.142	.569	.359	.580	–.093	–.295	–.283	1																				
11	.674	.670	.141	.548	.379	.605	–.027	–.263	–.234	.726	1																			
12	.553	.595	.132	.439	.308	.425	.001	–.293	–.227	.553	.542	1																		
13	.579	.613	.144	.466	.272	.453	–.046	–.287	–.235	.610	.552	.544	1																	
14	.347	.340	.115	.338	.326	.368	.053	–.094	–.060	.358	.354	.309	.296	1																
15	–.038	–.042	.264	–.007	.037	.004	–.067	.216	.248	–.048	–.038	–.063	–.072	.007	1															
16	.591	.643	.064	.451	.289	.442	–.067	–.303	–.278	.651	.587	.510	.545	.289	–.128	1														
17	.645	.672	.129	.516	.358	.515	–.054	–.285	–.229	.680	.623	.530	.565	.342	–.076	.718	1													
18	.590	.623	.116	.433	.288	.432	–.047	–.336	–.273	.588	.541	.666	.537	.309	–.086	.569	.618	1												
19	–.015	–.033	.228	.026	.009	.013	.007	.213	.164	–.019	.016	–.039	–.090	.036	.183	–.077	–.056	–.054	1											
20	.562	.594	.075	.470	.295	.479	–.003	–.239	–.216	.629	.585	.503	.487	.330	–.058	.568	.578	.568	.109	1										
21	.358	.372	.099	.347	.281	.334	–.052	–.103	–.051	.342	.338	.289	.364	.253	.017	.304	.362	.292	–.096	.308	1									
22	.616	.633	.156	.491	.325	.503	–.081	–.263	–.255	.623	.569	.501	.622	.298	–.041	.571	.635	.530	–.144	.475	.459	1								
23	.690	.750	.125	.518	.321	.515	–.103	–.351	–.300	.730	.643	.625	.661	.329	–.072	.676	.695	.668	–.084	.605	.381	.705	1							
24	.675	.703	.114	.489	.277	.516	–.116	–.352	–.303	.674	.591	.535	.656	.282	–.064	.623	.684	.585	–.194	.488	.428	.763	.774	1						
25	.679	.729	.160	.527	.333	.541	–.080	–.313	–.273	.728	.665	.585	.617	.335	–.054	.640	.670	.635	–.056	.604	.375	.645	.779	.706	1					
26	.553	.572	.051	.441	.328	.485	–.008	–.240	–.193	.543	.573	.465	.461	.291	–.057	.468	.482	.458	–.030	.467	.286	.472	.549	.516	.591	1				
27	.725	.768	.164	.536	.330	.560	–.118	–.331	–.281	.733	.677	.611	.664	.346	–.055	.656	.693	.651	–.091	.586	.427	.701	.811	.785	.785	.607	1			
28	.526	.538	.087	.424	.289	.448	.022	–.231	–.213	.529	.521	.451	.480	.284	–.074	.491	.489	.468	–.062	.440	.309	.473	.544	.519	.548	.473	.582	1		
29	.081	.072	.230	.090	.025	.061	–.101	.097	.110	.084	.090	.040	.017	.023	.163	.028	.037	.013	.256	.072	–.014	.005	.026	–.007	.054	.067	.034	–.015	1	
30	.180	.190	.243	.122	.020	.126	–.110	–.003	.003	.171	.177	.132	.112	.026	.127	.121	.103	.130	.210	.138	.017	.113	.178	.125	.181	.113	.174	.097	.396	1
M	3.13	3.18	2.58	3.01	2.74	2.96	2.31	2.22	2.24	3.15	3.04	2.99	3.14	2.78	2.42	3.11	3.12	3.01	2.30	2.91	2.99	3.26	3.22	3.35	3.16	2.98	3.26	2.97	2.44	2.58
SD	.98	1.03	.99	1.00	1.00	.99	1.07	1.03	1.05	1.04	.98	.98	1.05	1.06	1.02	.99	1.02	1.05	1.06	.99	1.06	1.02	1.03	1.06	1.03	1.04	1.01	.93	.95	1.04

Table 3 Rotated factor loadings of the EFA for self-reliance scale (n = 2,210)

Original items no.	*Statements*	*F1*	*F2*	*F3*	*F4*
SR27	I believe that I can accomplish my work	.90			
SR 23	I always try to achieve my goals	.89			
SR 25	I never give up easily	.86			
SR 2	I trust my competence	.86			
SR 24	I feel happy when I finish my work all alone	.85			
SR 10	I am ready to take challenges	.85			
SR 1	I am able to solve my problems	.83			
SR 17	I learn new things to work independently	.81			
SR 22	I believe independence makes one bold	.80			
SR 11	I am able to control difficult issues	.79			
SR 16	I try different plans to get new ideas	.77			
SR 13	I feel to grow, one should rely on one's strengths	.76			
SR 18	I organise my activities to finish them on time	.75			
SR 12	I finish my commitments on time	.71			
SR 20	I have strong will power to initiate new activities	.70			
SR 26	I manage my emotions	.67			
SR 6	I alone can handle a situation	.66			
SR 28	I am able to foresee problems	.66			
SR 4	I take decisions independently	.65			
SR 21	I dislike to consult people for petty things	.49			
SR 14	I am not a dependent person	.41			
SR 9	I share my problems with others so that I will not make a mistake (R)		.63		
SR 15	I like to get as much of support as possible from others (R)		.57		
SR 8	I consult my elders before taking a decision (R)		.56		
SR 3	I need someone's help when I am asked to do a work (R)		.56		
SR 7	I never face problems if no one is there to help me			.71	
SR 5	I don't rely on others			.50	
SR 29	I am unable to tackle problems spontaneously as they arise (R)				.68
SR 30	I am unable to convince people (R)				.68
SR 19	I feel nervous to start any new activity (R)				.65

Notes: The items with factor loadings lesser than 0.33 have been suppressed.
F1. Self-efficacy; F2. External dependence; F3. Autonomy; F4. Self-confidence deficit
Extraction method: principal component analysis.
Rotation method: Oblimin with Kaiser Normalisation
a. Rotation converged in 16 iterations.

Table 3 Rotated factor loadings of the EFA for self-reliance scale (n = 2210) (continued)

Original items no.	*Statements*	*F1*	*F2*	*F3*	*F4*
Eigen value		12.56	2.31	1.53	1.21
% of variance (51.89%) =		41.88	7.69	5.10	4.04
Reliability coefficients in each factor (Average Inter item correlation) Alpha coefficient for total scale (α = 0.92)		0.54	0.25	0.21	0.29

Notes: The items with factor loadings lesser than 0.33 have been suppressed.
F1. Self-efficacy; F2. External dependence; F3. Autonomy; F4. Self-confidence deficit
Extraction method: principal component analysis.
Rotation method: Oblimin with Kaiser normalisation
a. Rotation converged in 16 iterations.

Based on EFA four factors from the 30 items of the Self-reliance Scale were identified and named.

1 *Factor 1* was labelled '*self-efficacy*'. It consisted of 21 items explaining the belief about one's ability to complete a task. It reveals the confidence of the individual in his or her capability to handle and regulate one's own behaviour, in a socio-cultural context. It mainly focuses on individual's belief in his or her ability to thrive in certain situations.

2 *Factor 2* was labelled '*external dependence*'. It included the four negative items focused on the dependence on an external or outside source that is relied on before any task can be completed. The higher score in this dimension reflects that the individual is dependent on others in order to take any decision or to complete a task.

3 *Factor 3* consisted of two items. It was labelled '*autonomy*', an individual's status of independence and self-determination, Both the items loaded within this factor reflected dependence on one's own resources and strengths rather than taking others' help. It talks about the self-supporting aspect of the individual without anyone's help.

4 *Factor 4* was labelled '*self-confidence deficit*'. The three items loaded within this factor focused on a lack of confidence of the individual. The individual with deficit of self-confidence is full of self-doubt and has difficulty in trusting others. This factor is a negative measure. Higher scores indicate lower confidence levels.

Phase II was completed with naming of all the four factors explained above.

5.2.1 Phase III: reliability coefficients and concurrent validity

The scores of the items from each factor were added together to derive the subscale scores. Psychometric properties of the self-reliance scale were evaluated by average inter item correlation and Cronbach's alpha index of internal reliability (see Table 3). The internal consistency of the entire set of 30 items was $\alpha = .92$. Cronbach's alpha is sensitive to number of items. According to Nunnally (1978), Cronbach alpha levels can be quite low when the scale has a small number of components (less than 10). In this situation, it may be better to calculate and report the mean inter-item correlation for the

items. Because the items in each dimension were less than 10 (except self-efficacy dimension), the average interitem correlation was utilised as a statistical metric of internal consistency. Hence, internal consistency reliability for this study was measured in two ways: Cronbach's alpha for total items and the average inter-item correlations for dimensions wise items. According to Clark and Watson (1995), "average inter-item correlations should fall somewhere between 0.15 and 0.50 as anything below 0.15 would be too broad of a construct while anything above 0.50 would indicate redundancy of items on the scale".

- *Concurrent validity* – The concurrent validity was tested by examining the associations between the self-reliance scale and the self-regulation and BRS. Based on previous research, we expected a positive association between self-reliance, self-regulation and resilience. As reported in Table 4, the correlations were significant and in the expected directions, indicating that the self-reliance scale is concurrently valid.

Table 4 Bivariate correlations between self-reliance and its dimensions, self-regulation and resilience (N = 2210)

Variable		*Self-regulation*	*Resilience*
Self-reliance		.21**	.19**
1	Self-efficacy	.27**	.41**
2	External dependence	.17**	.15**
3	Autonomy	.31**	.35**
4	Self-confidence deficit	.41**	.42**

Note: **p < .01

6 Discussion

The aim of the present study was to develop a self-report measure of self-reliance scale. Based on the theoretical definitions of self-reliance, we anticipated the self-reliance scale to measure several domains of the construct. A four-factor structure – self-efficacy, external dependence, autonomy, and self-confidence deficit – was identified to develop this new scale called Self-reliance Scale. The result indicated self-reliance scale has satisfactory internal consistency (Cronbach's alpha = 0.92). The average interitem correlation for each dimension remained within the recommended limits, which suggests there is no redundancy in the content of the questions. Lastly, the instrument is precise and correlates positively with self-regulation and resilience, which supports the notion that the self-reliance scale has satisfactory concurrent validity.

7 Implications

The practice of making oneself the source of the consequences one desires, as opposed to wishing that someone else 'do something' is the essence of self-reliance. One of the characteristics of children is their near-total reliance on others. They rely on others to meet the majority of their requirements. With development, they become more reliant on

their efforts. Successful individuals learn to accept responsibility for their own life on all levels: physically, emotionally, intellectually, and spiritually. This is sometimes referred to as the virtue of self-reliance. People achieve personal power through self-reliance. Self-reliance is indispensable to psychological well-being.

Self-reliance has been demonstrated to be the key to personal efficiency in nearly every aspect of life, from working on one's relationships to pursuing a job to growing into a more entire and balanced human being. It is the moral underpinning of social existence. Self-reliance as a way of life and being in the world; to demonstrate that this practice is not a burden but a source of joy and personal power; to establish that we create ourselves, shape our identities, by what we are willing to take responsibility for; and to demonstrate that self-reliance is critical to our society's well-being. People have self-reliance strengths; however, they may not realise that they have them or know how to harness them so they can cope more effectively with life's problems.

The moderate form and the simple language used in this scale will have certain practical advantages related to administration across age groups and different organisational levels. Hence, it does not necessitate any proficiency to administer the scale. The scale can be administered individually or in groups. The greatest power of this scale is that it can be administered on a wide range of population and not limited to any specific group. Also, this tool may be beneficial to assess self-reliance across samples, especially those groups working in areas where the nature of the job role prerequisites self-reliance to accomplish tasks; for example, in military and defence services, disaster management teams, medical staff, police and security, etc. As the scale measures different aspects of the important variable of self-reliance, the applicability of the instrument will be vast and remarkable. Assessment of self-reliance is also vital for the development and testing of positive psychology intervention (PPI) modules in both vulnerable and non-vulnerable samples in order to foster self-reliance.

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Appendix

Self-reliance scale

NAME: _____ AGE: _____ GENDER: ____

School/College/ Organization---------- Government/ Private----------

Class---------- Years of Experience---------- CGPA/Percentage: ---------- Instructions: "Listed below are a few statements. Kindly read them carefully and respond appropriately by giving information regarding the support. You need to read each statement and select by putting a tick (✓) on response from the four options mentioned in columns. For example, for each of the following statements, please tick () in only one box that describes you the best. Please read each sentence carefully and answer honestly".

1 = Disagree; 2 = Somewhat disagree; 3 = Somewhat agree; 4 = Agree

S. no.	*Items*	*Agree*	*Somewhat agree*	*Somewhat disagree*	*Disagree*
1	I am able to solve my problems				
2	I trust my competence				
3	I need someone's help when I am asked to do a work (R)				
4	I take decisions independently				
5	I don't rely on others				
6	I alone can handle a situation				
7	I never face problems if no one is there to help me				
8	I consult my elders before taking a decision (R)				

9	I share my problems with others so that I will not make a mistake (R)
10	I am ready to take challenges
11	I am able to control difficult issues
12	I finish my commitments on time
13	I feel to grow, one should rely on one's strengths
14	I am not a dependent person
15	I like to get as much of support as possible from others (R)
16	I try different plans to get new ideas
17	I learn new things to work independently
18	I organise my activities to finish them on time
19	I feel nervous to start any new activity (R)
20	I have strong will power to initiate new activities
21	I dislike to consult people for petty things
22	I believe independence makes one bold
23	I always try to achieve my goals
24	I feel happy when I finish my work all alone
25	I never give up easily
26	I manage my emotions
27	I believe that I can accomplish my work
28	I am able to foresee problems
29	I am unable to tackle problems spontaneously as they arise (R)
30	I am unable to convince people (R)

R = Reverse scoring

Factor 1 Self-efficacy (1, 2, 4, 6, 10, 11, 12, 13, 14, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28)

Factor 2 External dependence (3, 8, 9, 15).

Factor 3 Autonomy (5, 7).

Factor 4 Self-confidence deficit (19.29, 30).

Self-reliance (All 30 items)