

Development of an Indigenous Self-Image Profile (ISIP) for Adolescence

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Abstract

Self-image during adolescence is crucial because it affects many facets of life, including career success, personal fulfillment, social interactions, and mental health. Self-image is the way through which adolescents perceive and think about themselves. It provides them with a mental picture of their physical appearance, personality, capabilities, and values. Therefore, to explore the structure of self-image in adolescence, this study aimed to develop an indigenous self-image profile (ISIP). Considering the purpose of exploring the phenomenology of self-image, 30 school-going adolescents were interviewed in phase I, and 45 items related to self-image were obtained. In phase II, these items were evaluated by expert clinical psychologists with a minimum experience of 10 years. In phase III, the final selected items were administered to school-going adolescents ($N=270$) along with a self-esteem scale (Saleem & Mahmood). Furthermore, factor analysis of the self-image profile revealed three factors: proficient self-image, emotional self-image, and distressed self-image. The results demonstrated high internal consistency (.71***) of this profile. Split-half reliability analysis also ensured the reliability (.45**) of the scale. The ISIP also indicated a moderate correlation (.44**) with the self-esteem scale which established its concurrent validity. Moreover, percentile ranks were also established to determine the type of self-image. These ranks will help establish a self-image profile of an individual which will reveal the prominence of a certain type of self-image among individuals. Higher means will predict the strength of a specific type of self-image.

Keywords: self-image, adolescence, scale development.

Introduction

Adolescence, which normally lasts from the ages of 10 to 19, is a crucial period in human development. This stage of life is marked by quick changes in the body, mind, and emotions. It also encompasses changes in social interactions, identity creation, and mental health development, among other aspects of life. In addition to being a biological stage, adolescence is a crucial time for social and psychological development that establishes adult duties and responsibilities (Sawyer et al., 2018). Puberty and the development of an identity characterize this stage, when teenagers start to investigate how their gender, culture, and social expectations relate to their sense of self. Hormonal changes have a major impact on physical growth, while cognitive alterations have an impact on learning and reasoning skills. The brain reorganizes during adolescence, improving cognitive function but posing emotional and behavioral issues that need to be considered in a larger context. A key component is identity formation, which can be complicated by challenging events

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in life that can have negative effects on emotional and psychological health (Neinstein & Kaufamn, 2017).

The adolescent years are critical for the formation of one's self-image as well as identity formation. An intricate web of interactions between physical, emotional, cognitive, and social aspects plays a role in the construction of one's self-image. Adolescents explore their identities and reflect on themselves while navigating changes in their relationships (Harter, 1999). Adolescence is a time of developing their self-image, which is frequently influenced by family dynamics, peer interactions, and socioeconomic situations. As they start to consider their place in society and identify who they are, adolescents go through a crucial self-formation process. According to research, a wide range of characteristics, such as family engagement and socioeconomic background, have an impact on how an identity is formed (Tanti et al., 2011). Physical changes like puberty in early adolescence set off self-awareness and body image concerns. Teenagers start evaluating themselves against classmates and societal norms, which affects how they see themselves. Additionally, teenagers begin to grow emotionally and cognitively throughout this time, thinking about their identity and how others see them. Early adolescence is a time when people tend to become more self-conscious and vulnerable to peer pressure (Sebastian et al., 2008). Furthermore, there is a strong correlation between body image and self-concept throughout this time, particularly in girls. Puberty may cause people to become dissatisfied with their changing bodies which has a detrimental effect on their self-esteem and self-image (Clay et al., 2005).

Deeper self-exploration and the development of one's image are hallmarks of middle adolescence. Adolescents' self-image is more shaped by their peer interactions as they grow more independent of their parents. Their sense of self is greatly influenced by social comparison, peer approbation, and anxieties about fitting in. The process known as "reflected self-appraisal" occurs when adolescents start to define themselves based on how they believe others see them (Pfeifer et al., 2009). During this time, self-esteem is extremely erratic and frequently changes in reaction to social interactions' input. Psychological discomfort, such as anxiety and depression, has been linked to negative self-image in areas including social competence, emotional regulation, and familial connection (Di Blasi et al., 2018). Self-image stabilizes by late adolescence as people start to have a stronger sense of who they are. Attaining emotional maturity requires balancing the "real self" with the "ideal self," which is a common task at this level. Additionally, late teens have a stronger capacity to combine their self-concept, social duties, and personal beliefs into a cohesive identity. Studies reveal that throughout this stage, teenagers depend more on their assessments of their value rather than on approval from their peers (Morin et al., 2011). Adolescent self-image formation has long-term effects on mental health and social functioning. Teens who have a stable, positive view of themselves are better able to deal with the obstacles of life, whereas teens who have a poor view of themselves may experience anxiety, depression, and other emotional problems (Birkeland et al., 2012).

Adolescents' developing sense of self is a dynamic process that is greatly impacted by bodily changes, social interactions, and cognitive growth. Body image issues first surface in early adolescence, and they intensify in middle adolescence due to peer pressure and social comparison.

People solidify their identities and self-concept by late adolescence, which may affect their long-term mental health. Adolescents are also capable of more in-depth self-reflection due to changes in their cognitive processes. They start to ponder hypothetical situations about themselves and their future and start thinking abstractly. Together with heightened self-awareness, these new cognitive capacities make teenagers more perceptive to their image in the eyes of others (Sebastian et al., 2008). Self-image has always been an important area of interest for researchers due to the vital role of this concept in everyone's life. Many researchers have established different tools to assess self-image in children, adolescents, and adults. One of the prominent tools named self-image profile for adolescents and adults established by Butler (2011) has been used commonly for assessment. The concept of self-image was also assessed through PHCSCS (Piers & Harris, 1969). Tennessee self-concept scale developed by Roid and Fitts (1988) is another example of an assessment modality.

To assess the self-image of adolescents, a proper evaluation of several existing self-image/concept measures is also needed. Indigenous research has also been carried out on self-concept, self-image, and self-esteem. Rosenberg's self-esteem scale has been widely used for different studies on self-esteem as well as self-concept which was translated in Urdu by Rizvi and Hussain in 2008. The translated version of Rosenberg's self-esteem scale has also been used in different Pakistani studies (Farid & Akhtar, 2013). Moreover, an indigenous scale was also developed in Urdu to evaluate the self-esteem of school children in Pakistan (Saleem & Mahmood, 2011). This scale covers different aspects such as social, academic, and physical self-esteem. Another cross-cultural survey design study was conducted on a sample of 388 adolescents from Chinese schools and 224 adolescents from Pakistani school children aged 11 to 13, for the development and validation of a self-esteem scale adapted for Chinese and Pakistani adolescents (Khalid et al., 2023). Although different studies developed, translated, and adapted self-esteem scales and then used them to evaluate both self-image and self-esteem but specific scales on self-concept have also been established, translated, and validated in different Pakistani populations. Tennessee self-concept scale is one big example among them (Naz & Gul, 2016) which has been used to assess self-concept/Image in different studies. Short scales on Self-concept were also translated and adapted for adolescents' evaluation (Sahar & Nadeem, 2021). Specific types of self-images were also catered for scale development such as body image (Alali-Farahani et al., 2022) and moral self-image (Naeem et al., 2022).

Most researchers have used self-esteem scales to measure self-image which conceptually raises different questions on the equivalence of both concepts. Though self-esteem has been used interchangeably with self-image and self-concept but it's different in terms of conceptual meaning. Literature also indicated that self-esteem is the evaluation of self-image. Considering this fact, researchers translated and adapted scales specifically on self-concept to measure this phenomenon but the translation of foreign scales limits the cultural relevance of this concept. Keeping in view the cultural relevance, some researchers developed Indigenous scales on self-image but they were focused on a specific type of self-image such as body image, moral image, etc. or they are time-worn. The existing scales on self-image being in English, adapted/translated, or time-worn to

highlight the need to develop an indigenous self-image profile that can give a clear idea about one's self-image. The current study was an attempt to cover the maximum areas of self-image according to the definition, "*Self-image refers to the cognitive and affective perceptions an individual holds about themselves, encompassing their physical appearance, personality traits, abilities, values and overall sense of identity*" (Kaplan, 2004). The objective of the present study was to develop an indigenous self-image profile (ISIP) for adolescents.

Method

The present study was designed to develop an indigenous self-image profile for adolescence. This research comprised of three phases.

Phase I: Exploring Phenomenology about Self-Image in Adolescence

Sample

Purposive sampling was used to select the participants to explore the phenomenology. The sample consisted of 30 adolescents, both girls and boys from three government high schools in Lahore City from the 7th, 8th, 9th, and 10th grades. The age range of the sample was 13 to 16. The adolescents of ages less than 12 and above 16 were excluded from the sample.

Instruments

A semi-structured interview was designed with the help of literature. Moreover, 3 clinical psychologists/school counselors with a minimum of ten years of experience in the field were also interviewed. Following are some sample questions from the interview:

1. How would you describe yourself?
2. What type of person you are?
3. What are your strengths and weaknesses?
4. How do you see yourself in different roles in your life?

Semi structured interviews were conducted with the sample. Through the interviews, phenomenology was explored regarding adolescents' self-image. The verbatim explored during first phase was gathered and refined for the final scale. Unique items were retained for the final profile and similar items were excluded.

Phase II: Establishing the Content Validity

The purpose of the second phase was to establish the content validity of the indigenous self-image profile. The content derived through phase I was evaluated by expert clinical psychologists with minimum experience of 10 years for the purpose of expert validation.

Phase III: Determining the Psychometric Properties of ISIP

The purpose of the main study was to establish the psychometric properties of ISIP.

Sample

A sample of 270 adolescents was collected from 3 main government schools of Lahore city. Research participants were selected through random sampling from middle and Metric classes of the public schools of Lahore.

Instruments

Indigenously designed ISIP along with a self-esteem scale (Saleem, & Mahmood, 2011) were administered on the selected sample to establish the psychometric properties of the newly

developed scale. ISIP is a 4-point Likert scale ranging from 0 to 3 consisting of 45 items. The total score of each factor of the scale would be transferred to the given percentile ranks which will reflect the distinction of each type of one's self-image. Furthermore, it would reflect the self-image profile of an individual.

Procedure

Written and verbal informed consent was taken from the school authorities including principals and class teachers. Written and informed consent was also taken from the students of middle and high school. Research participants were approached through random sampling. ISIP and Self-esteem scale were given to the participants with both verbal and written instructions which explained the guidelines about recording the responses on the scales. Participants filled out the forms within 30-40 minutes. After collecting the data, debriefing was done.

Ethical Considerations

- First of all, the consent of the school authorities, teachers, and participants was taken into consideration.
- In this study, verbal as well as written consent was taken from the sample.
- Their confidentiality was also ensured and the right to withdraw from the process of research was also given to the participants.
- Debriefing was also done after the data collection.
- Brief counselling sessions were also provided to the students who wanted to talk about their personal issues.

Results

The results of the current study aimed to establish the psychometric properties of ISIP that included factor analysis and scree plot mainly. Furthermore, reliability analyses, concurrent validity, and percentile ranks of the ISIP were also established.

Factor Analysis

Factor analysis revealed that Kaiser-Meyer-Olkin's measure of sampling adequacy is .76 indicating suitability for factor analysis. Bartlett's test of sphericity (326.48) is significant ($p < .001$), indicating item correlations. The scree plot suggested 3 factors. Eigenvalue analysis revealed that 3 factors explained the most variability. In this study three factors with high loadings were selected, naming them based on the concepts they represented. The three-factor solution was retained due to its clarity and distinction between items. The results supported the scale's construct validity and reliability.

Table 1 shows a factor analysis of 45 items into three factors ensued after exploratory analysis with varimax rotation was conducted. The analysis reflects that 45 items show high factor loading, that is above $>.40$ which were retained whereas merely 15 items with low factor loading were discarded in the process. Items in each factor are different in number as factor 1 contains 20 items, Factor 2 consists of 6 items, and factor 3 includes 4 items. Further details about the nature of the items are given below.

Table 1*Exploratory Factor Analysis with Varimax Rotation*

Item No.	Factor 1 Proficient/Capable self-image	Factor 2 Emotional Self-Image	Factor 3 Distressed Self-image
ISIP1	.54		
ISIP4	-.46		
ISIP5	.49		
ISIP6	.44		
ISIP7	.53		
ISIP11		.47	
ISIP12		.42	
ISIP14	.53		
ISIP15	-.43		
ISIP16			.535
ISIP17			.545
ISIP18	.60		
ISIP19	.57		
ISIP20	.42		
ISIP21	.47		
ISIP22	-.49		
ISIP23	.50		
ISIP24		.49	
ISIP25	-.43		
ISIP27	.42		
ISIP28	.46		
ISIP29		.54	
ISIP30		.49	
ISIP31	-.47		
ISIP33	.64		
ISIP34	.44		
ISIP35	.48		
ISIP42		.40	
ISIP44			.58
ISIP45			-.45
Eigenvalues	6.51	3.49	2.33
Variance	14.47	7.76	5.18
Cumulative Percentage	14.47	22.23	27.42

Factor I, is named as proficient/capable self-image. This factor of the scale is based on 20 items. The items of this subscale indicate the content related to capability, proficiency, and competence. A higher score on this subscale will refer higher level of one's sense of capability and proficiency. Factor 2 is named as emotional self-image. It consists of 6 items. Mainly, the items of this subscale represent sensation seeking, anger proneness, impulsiveness, and talkativeness. This subscale will refer high level of emotionality. Factor 3 named as distressed self-image which consists of 4 items. High scores of this subscale refer to a high level of distressing self-image.

Figure 1

Scree Plot for Factor Analysis of ISIP

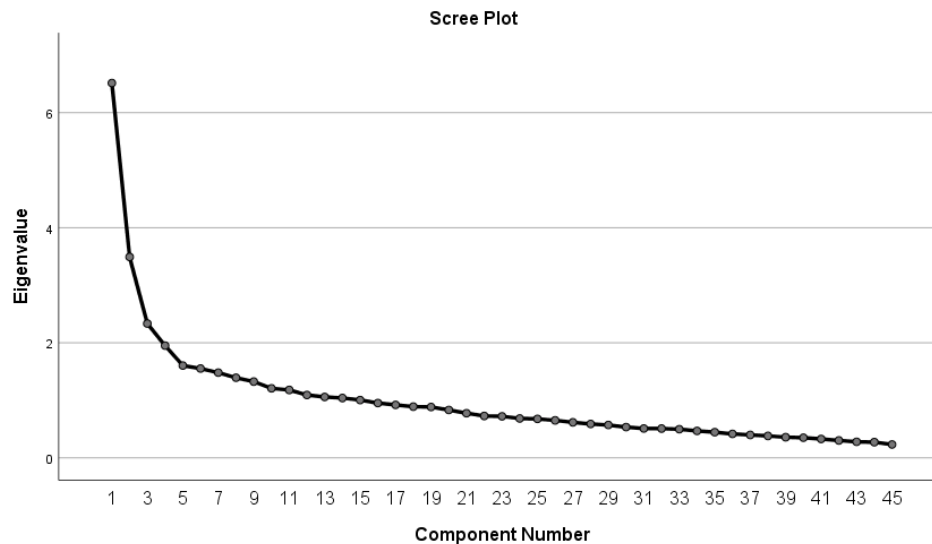


Table 2

Split Half Reliability Analysis of ISIP

Scale	Items	<i>M</i>	<i>SD</i>	Alpha Coefficient	Split Half Reliability	Spearman Brown Correction
ISIP	45	127.34	11.54		.45	.62
Half I	23	65.53	6.9	.61		
Half II	22	61.81	6.6	.55		

Note. ISIP=Indigenous Self-Image Profile

In the split-half reliability, a test is split into two halves, odds and evens. The correlation between the two halves is the estimate of reliability. This approach makes the assumption that the randomly divided halves are equivalent and their reliability is .45. Both halves contained 23 and 22 items respectively and the total number of items was 45. The Cronbach's Alpha for the first half 22^a was .61 and for the second half 22^b was .55. The two scores for the two tests are similar and hence the test is reliable.

Furthermore, Cronbach alpha of the scale is .71 which indicates the high internal consistency of the scale.

Table 3*Correlations between ISIP and Self-Esteem Scale*

Scales	ISIP	SES
Indigenous Self-Image Profile (ISIP)	-	
Self-Esteem Scale (SES)	.44**	-

** $p < .01$.

The concurrent validity was established by finding the correlation between developed ISIP and Self Esteem Scale. Table 3 shows that there was a positive and significant correlation between the two scales. Hence, concurrent validity was established against an already developed tool.

Table 4*Percentile Ranks for Three Factors of ISIP*

Percentile	FI	FII	FIII
	Proficient/Capable Self-image	Emotional Self-image	Distressed Self-image
Mean	60.05	15.30	9.60
SD	5.69	3.85	2.53
10	51	10	7
20	55	12	7
30	58	13	8
40	60	14	9
50	61	15	9
60	62	16	10
70	63	17	11
80	65	19	12
90	66	21	13
95	68	22	14

Table 4 shows the mean and standard deviations of each of ISIP. Moreover, it shows the percentile ranks of each factor of ISIP will be helpful to indicate each individual's distinct patterns of their self-image. It can also reveal that which type of self-image is higher distinctively among individuals. It has been established that below the 50th percentile will be considered as a low level of each type of self-image and above the 50th percentile will be considered as a high and strong pattern of each distinct type on the self-image profile.

Discussion

Self-perceptions and personal attitudes during early adolescence play a vital role in developing individuals' self-image which further helps them to achieve an optimal level of their self-esteem (Nasarre et al., 2023). Moreover, self-perceptions and self-acceptance are also considered as major contributing factors in developing unhealthy behaviors in adolescents which

are reflected in their self-image (Pollina-Pocallet, 2021). The self-image is a structured framework that shapes how individuals see themselves, others, and their social relationships (Leary & Tangney, 2011; Vazire & Wilson, 2012). Even when two people share similar content in their self-concepts, they may experience vastly different levels of self-worth depending on how their self-concepts are organized (Showers & Zeigler-Hill, 2006). Self-concept is alternatively used with self-image which is a key psychological construct that develops through interpersonal interactions and is strongly influenced by the expectations and judgments of important figures in one's life, such as parents, siblings, and peers (Skaalvik & Bong, 2005).

Three significant psychological terms i.e. self-image, self-concept, and identity have been widely used together, interchangeably and provide foundational stones for one's self-esteem. But there is a strong need to make them separate and distinct from each other just to make them objective and measurable. Self-image is a mental picture of one's own measurable characteristics, and self-concept is an organized collection of beliefs and feelings about such characteristics and the cognitive appraisal of these features helps an individual to form his identity (Joseph & Bailey, 2003). When individuals add value to their characteristics creates their self-esteem. This debate highlights the need to establish separate measures to assess these concepts separately.

The present study was an attempt to explore the cultural expression of the self-image of adolescents in Pakistani culture. An indigenously developed self-image profile is a depiction of how adolescents see themselves in terms of their values, abilities, competencies, and personality. Keeping in mind the crucial phase of adolescence, it was pertinent to explore the constructs of self-image during this phase as they play an essential role in developing a sense of self-efficacy among adolescents which determines their future horizons (Bacchini & Magliulo, 2023). Although there are different scales available but they are translated, adapted, and timeworn. Thus, there was a need to establish a detailed profile of the constructs of self-image among adolescents.

The findings of the newly developed self-image profile demonstrate that this exercise is relevant. Varimax rotation was used in the factor analysis of the Indigenous Self-Image Profile (ISIP) for Adolescence. Varimax helps to clarify the distinct characteristics of each factor and it also helps to understand each factor of ISIP (Kaiser as cited in Kline, 1994). Three factors have emerged through varimax rotation factor analysis and their underlying constructs revealed that we can understand adolescence self-image through proficient/capable self-image, emotional self-image, and distressed self-image. These factors have been named based on their content as each factor revealed a different presentation of each construct. The content of all three factors of the self-image profile is quite relevant to the psychological, emotional, and social state of mind among adolescents.

The first factor named as "Proficient/ Capable Self-Image". This title was selected on the basis of the content provided by adolescents such as hard-working, eager to learn, kind-hearted, studious, loving, caring, religious, and organized. This factor indicates individuals' capacity to stay positive, capable, functional, and productive which also reflects a sense of efficacy among them. Individuals who'll score high on the first factor named proficient/capable are most likely to have greater chances to develop better self-esteem (Kalliop, 2022). Literature also indicated that

Adolescents who perceive themselves as capable, likable, and positive compared to their peer group are more likely to have higher self-esteem than those who feel unloved, incapable, or believe they are inferior to their peers. The reason behind a better state of self-esteem is their functional role development and positive evaluation of their roles during this phase which further equip them for future roles in a confident manner (Makri-Botsari, 2001).

The second factor is named as “Emotional Self-Image” which reflects the distinct and the most crucial phase of adolescence. For decades, researchers have emphasized the vulnerability of adolescence characterized by significant emotional fluctuations, and struggle (Erickson, 1968). This factor contains different emotional expressions such as anger, impulsiveness, talkative, sensation seeker, and wit, etc. Literature also indicates such emotionality during the phase of adolescence affects individuals. These findings were derived through qualitative exploration of non-clinical samples for their emotional distress (Neill et al., 2021).

These emotional changes, pubertal challenges, and increased social comparisons highlight the personal shortcomings of individuals resulting in declined self-concept. And, if it persists, it can lead to distress in one’s life (Ferro et al., 2015). Individuals having such distressing emotional states are more likely to develop symptoms of anxiety, depression, and other psychological issues (Ferro & Boyle, 2015). The third factor of ISIP also revealed the same issues in adolescents’ self-image. Factor III of the scale named as “Distressed Self-Image” derived on the basis of distressed expressions of adolescence i.e. anxiousness, loneliness, and sadness. In adolescence, physical-mental comorbidity is linked to a lower self-concept, with age playing a moderating role—differences between adolescents with and without comorbidity are more pronounced in older adolescents and are clinically significant. It is important to provide opportunities to foster positive self-perceptions in adolescents so that we can ensure their psychological as well as physical health (Ferro et al., 2023).

Through the findings of factor analysis, we can assess one’s self-image profile through the constructs indicated by three factors of ISIP. Furthermore, concurrent validity and reliability were also established to ensure the psychometric properties of the ISIP (Taherdoost, 2016; Fu et al., 2022). Results of concurrent validity indicated that ISIP has an approximately moderate level of correlation with the Self-esteem scale (Saleem & Mahmood, 2011). Reliability analyses also ensured that ISIP is a reliable tool for assessing the self-image profile of adolescents. Its results revealed good alpha values ranging from .61 to .55, and split-half reliability is .45. It also depicted a high value (.62) of Spearman-Brown correction. These properties established the robustness of the tool (Alvi et al., 2023). The percentile ranks were also provided in this study which can further clarify the self-image profile of an individual as the lowest and highest scores on each factor will determine the strengths as well as the weaknesses of a certain characteristic of one’s self-image.

Conclusion

This study is helpful in explaining the true expression of adolescents’ self-image through indigenously developed self-image profiles. It provides the direction to the researchers to design future studies by keeping in view the expression of adolescents’ self-image. Moreover, it is also

helpful for the counselors to provide guidance to the adolescents on their capabilities, emotionality, and distress.

Limitations and Recommendations

The sample of the current study was collected only from one city i.e. Lahore. Moreover, the sample was collected only from the public schools. In the future, schools from different cities will be included in the sample to increase the generalizability. Furthermore, participants from the private schools will be included in the sample in future studies. Moreover, confirmatory factor analysis can be done in the second phase of the study for increased efficacy of measurement model.

Implications

This culturally relevant self-image profile can lead to more effective assessment and intervention strategies for school going population. It can reduce the risk of cultural bias regarding self-image. It can also provide guidelines to policy makers to promote conducive school environment that can promote healthy self-image among school children.

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