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## Adaptation and Validation of Aricak's Professional Self-Esteem Scale for use in the Pakistani Context

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### Abstract

One of the characteristics of teachers having great bearing upon students' learning is their professional self-esteem. Various instruments are available for measuring general self-esteem and professional self-esteem of teachers. For the present study it was deemed appropriate to use a Turkish professional self-esteem scale developed by Aricak (Aricak, 1999). However, before conducting the actual study, it was decided to check the construct validity of the Aricak scale and to see how the instrument behaves in the Pakistani context. This instrument is a Likert type (five points) scale having originally 30 items with 14 positive and 16 negative statements. Aricak (1999) reported a Cronbach Alpha coefficient 0.93 (n=152) and test-retest reliability coefficient 0.90 (n=92, p<01) of the scale. However, the first administration of the original English version of the scale in Pakistan resulted in 0.84 reliability of the scale, which was considered less than satisfactory. Two measures were taken to adapt the Aricak scale and to improve its validity and reliability to reflect and suit the local values. Firstly, the scale was translated into Urdu, the national language of Pakistan in order to increase its comprehensibility, resulting in the improvement of the reliability of the Urdu version of the scale with its original 30 items to 0.89. At the second stage, seven more items (4 positive and 3 negative) were added to the scale. Reliability of the revised scale with 37 items was found to be 0.93. The paper also describes that unlike the original scale having three factors, 37 items of the revised and adapted scale loaded on five factors.

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**Keywords:** Self-esteem; professional self-esteem; factor loading; factor structure.

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## 1. Introduction

Teaching and learning is a very complex phenomenon mediated by a host of factors related to students, family, teachers and school environment. A review of literature reveals that teachers constitute an important variable impacting student learning and achievement in all subject areas, but more particularly in science and mathematics (Iqbal, Fariha & Tayyab, 2015; Pell & Iqbal, 2015; Iqbal, Pell & Shafiq-ur-Rheman, 2013). One of the characteristics of teachers having a great bearing upon students' learning is their professional self-esteem. A literature search also reveals that the concept has been discussed at two levels: self-esteem in general (White, 1963; Rosenburg, 1965; Higgins, 1983) and professional self-esteem with reference to the particular profession of the individuals (Super, 1969; Brock, 1999).

Bandura (1995) defines the concept of self-esteem as "the belief in one's capabilities to organize and execute the courses of action required in managing prospective situations" (p.2). Branden (1969) defined self-esteem in terms of feeling competent to cope with the challenges of life and of being worthy of happiness, which was modified by the National Association for Self-Esteem as "The experience of being capable of meeting life's challenges and being worthy of happiness" (Reasoner, 2015). These definitions clearly demonstrate that academicians or psychologists do not agree on a single definition of self-esteem. However, a review of literature reveals that experts do agree on some common elements of self-esteem which include cognition, behaviour, attitude, competence, worth, and evaluation. This means that in addition to being linked to one's emotions, self-esteem is also related to one's cognition which enables a person to judge his/her self-worth and develop an attitude towards the self accordingly (Rosenberg 1965).

Professional self-esteem is related to the value and worth an individual attaches to his/her chosen career. Tinsley (2002) describes the same concept stating that "Professional self-esteem is an individual's self-esteem specifically in regard to his or her professional position and acceptance in that professional role (p.16)". Referring to the professional self-esteem of teachers, Young (1997) opines that professional self-esteem of teachers refers to the manner in which they perceive their teaching efficacy, teacher-student relationship and commitment to teaching. Brock (1999), on the other hand provides another view regarding teaching and the role self-esteem plays in enabling a teacher to carry out his responsibilities effectively. Common attributes of the teaching profession include understanding students' academic needs and employing all possible measures to fulfil those keeping in view their interests and weaknesses and helping them to realise their maximum

potential. In other words, the real virtue of the teaching profession lies in providing students with suitable learning opportunities and an environment conducive to the development of their innate capacities. Only with sound cognitive abilities and high self-esteem, can teachers perform such a challenging job. It goes without saying that all these character attributes are essential elements of professional self-esteem.

In recognition of the fact that teachers constitute an important factor in implementing successful learning, reshaping individuals lives and developing cognitive abilities of their students, the interest of the academic community to investigate this aspect has increased over the last few years, focusing in particular on the professional self-esteem of teachers.

This article is part of the study that was actually conducted to measure professional self-esteem of teachers in Pakistan and to see what demographic factors affect the development of this important psychological construct. Various instruments are available for measuring general self-esteem (Metcalf, 1997) and professional self-esteem of teachers and teacher educators (Tinsley, 2002; Bholan, 2013). After reviewing a number of instruments, it was deemed appropriate to use a Turkish professional self-esteem scale developed by Aricak (Aricak, 1999). This decision was made keeping in view many similarities between Turkey and Pakistan in terms of social and cultural values as well as religious traditions. However, before conducting the actual study, there was a need to check the construct validity of the Aricak scale and see how the instrument as a whole and its various components behave in the Pakistani context.

## **2. Purpose of the Study**

As indicated earlier, the basic aim of this study was to assess the content validity and reliability of the Aricak scale and to see whether the factor structure of the scale holds true in the Pakistani context.

### *2.1 Research questions*

This paper attempts to answer the following research questions in particular:

- a) Is the factor structure of Aricak's Professional Self-Esteem scale valid for Pakistani respondents?

- b) Does the Aricak scale demonstrate the same level of validity and reliability in Pakistani context as it does in its original context?
- c) Can the scale be adopted or adapted to effectively function in the Pakistani context?

### **3. Method and Procedure**

#### *3.1 The original instrument*

The Aricak scale, which was originally in Turkish, was procured from the author and permission to use it in Pakistan was sought. This instrument is a Likert type (five points) scale having 30 items with 14 positive and 16 negative statements. Each statement was graded as “Strongly Agree 5”, “Agree 4”, “Undecided 3”, “Disagree 2”, and “Strongly Disagree 1”. Positively scored items were 2,5,7,9,11,13,14,16,18,20,24,26,28, and 30, whereas negatively scored items were 1,3,4,6,8,10,12,15,17,19,21,22,23,25,27 and 29. Scoring was reversed for the negative items. The maximum score of an individual on the scale was 150, while the minimum score could be as low as 30. Aricak (1999) reported a Cronbach Alpha coefficient of 0.93 when he administered the scale to 152 respondents and a test-retest reliability coefficient of 0.90 (administered to a sample of 92),  $p < 0.01$ .

#### *3.2 Adaptation of the instrument*

Replication or re-administration of an instrument originally developed for another culture raises the issues of bias or cultural compatibility. Extending the discussion in this regard, Liamputtong (2008) and Green and Thorogood (2004) are of the view that in social sciences research, language used in the construction of questionnaire is an important factor in eliminating the bias in information received. Similarly, in an analysis of the biases prevalent in cross-cultural research, He and van de Vijver (2012) reiterate that normally three types of biases, that is, construct, method, and item bias, need to be addressed by the researchers while replicating or conducting a cross cultural research. He & van de Vijver (2012) also argue that of the three options available to the researcher while selecting an instrument for a cross-cultural research namely adoption, adaptation, and assembling, adaptation and assembly is preferable if the aim is to maximise the ecological validity of the instrument. By establishing ecological validity of the instrument, the researchers mean to ensure that the instrument adequately measures the construct in a target culture. Keeping in view the non-existence of locally-constructed instruments to measure the professional self esteem of teachers in Pakistan, the researchers were left with no choice except

to select instruments developed for another cultural setting. Our literature search revealed that although various instruments are available to measure self-worth of the individuals, these were constructed to measure self esteem either as a global construct (Rosenberg, 1965), or for use within other professions, for example nursing (Lacobucci *et al* 2012) or for physicians (Carmel, 1997). The researchers could find only one professional self esteem scale for use with education professionals developed by Aricak (Aricak, 1999). Hence, the researchers decided to use the Aricak scale but adopted a rigorous method of adaptation in light of the above discussion and in line with suggestions made by Gjersing *et al* (2010), who articulate that a mere translated version of an instrument in another linguistic context is inappropriate. Gjersing *et al.* (2010) argue that a multi-step process of adaptation is important when an instrument is used in a different language, time and setting if the risk of introducing the bias into the study is to be reduced.

Accordingly, the adaptation process involved a multi-step process to enhance the ecological validity of the Aricak scale for use in the Pakistani context. This multi-step process of adaptation involved translation of the Turkish version into English, a review of the translated version to assess its suitability in the Pakistani context, addition of some items to the scale, and finally translating the instrument into Urdu and administering both versions of the scale simultaneously to the participants. The original Turkish version of the instrument was firstly translated into English and pilot tested with a Pakistani sample of 91 teachers selected from nine secondary schools situated in a metropolitan city of the Punjab. The translation was done by a language expert well versed in both the Turkish as well as English languages. The translated version was certified by a translating agency, an academic institution in fact, and content validity of the translated version was checked by academic experts. When tested, the English version of the scale rendered a Cronbach alpha reliability coefficient of 0.84, which falls into an acceptable range (Nunnaly, 1978; Kline, 1999).

Two additional measures were taken to adapt the Aricak scale and to improve its ecological validity and to incorporate local realities of teachers' life in Pakistan. During pilot testing, the researchers realised that many teachers did not fully comprehend various terms used in the English version. Hence, it was decided to translate the scale into the national language of Pakistan, Urdu. The translation was done by two independent translators who then agreed upon the final version by comparing both the translations. The reliability of the Urdu version was tested by administering the instrument to 105 respondents selected from 11 secondary schools from the same city but different

from those included in the first round of pilot testing. As expected, translation of the scale into Urdu resulted in an increase in the reliability coefficient from 0.84 to 0.88.

At the second stage, the content of the statements of the scale was analysed carefully by experts in the field of teacher education and psychometrics to determine to what extent the scale reflects values, feelings and thoughts of the local teachers regarding their professional life. Keeping in view that some aspects of teachers' professional life in the Pakistani context were missing from the scale, a decision was made to add seven more items, items 31 to 37 to the scale. Out of these seven items, four items (items 31, 32, 35 and 36) were positively stated while three items (items 33, 34 and 37) were negatively stated. Moreover, although the Urdu version of the scale improved its comprehensibility, some terms translated into Urdu also proved difficult for the participants to understand because these terms were neither part of their everyday vocabulary nor part of their academic repertoire. Therefore, after consultation with senior academicians, a combined version of the scale containing both the English as well as Urdu statements together was administered to another sample of 191 school teachers selected from secondary schools of the same city. However, these schools were either different from those included in first two samples or different teachers were included from the same school. No participant was repeated in any administration of the revised scales. It also needs to be clarified that administration of instruments in both languages, English and Urdu, has now become the practice in Pakistan. This combined version of the scale with 37 items resulted in the improved reliability of the scale to 0.93.

#### **4. Results**

Data obtained after the administration of the revised and adapted 37-item scale to 191 teachers was analysed to measure the reliability of the total scale, its components and each item as well as factorization. Findings of this analysis are presented in various tables below. Table 1 depicts reliability statistics.

**Table 1.** Mean values, standard deviation and reliability of each item

| Sr.# | Statements  | M     | S <sup>2</sup> | r    | α   |
|------|---|-------|----------------|------|-----|
| 1    | I deserve better professions than my current one.   | 147.9 | 299            | .34  | .91 |
| 2    | My profession is very important for me.   | 146.7 | 304            | .418 | .91 |
| 3    | I don't find my profession to be suitable for my personality.   | 147.3 | 300            | .391 | .91 |
| 4    | I cannot respond proudly when my profession is asked.   | 147.3 | 295            | .47  | .91 |
| 5    | I think I can be productive and efficient in my profession.   | 146.8 | 305            | .425 | .91 |
| 6    | I chose my profession reluctantly.  | 147.2 | 297            | .548 | .91 |
| 7    | My profession is a part of myself.  | 147.0 | 297            | .523 | .91 |
| 8    | Cannot concentrate on the intellectual activities that my profession requires.                        | 147.4 | 302            | .37  | .91 |
| 9    | I respect my profession a lot.  | 146.6 | 302            | .534 | .91 |
| 10   | Because of a preference error, currently I hold a profession that I do not want.                      | 147.0 | 295            | .654 | .91 |
| 11   | I think my profession is a preferred and desired profession.  | 146.8 | 299            | .569 | .91 |
| 12   | I could not yet adopt the values of my profession.  | 147.4 | 295            | .538 | .91 |
| 13   | I am happy with my profession.  | 146.7 | 296            | .666 | .91 |
| 14   | My profession has the attributes to affect people.  | 146.7 | 304            | .456 | .91 |
| 15   | I despise my profession.  | 146.7 | 299            | .578 | .91 |
| 16   | I can give myself emotionally to my profession.   | 146.8 | 298            | .64  | .91 |
| 17   | There are times I live conflict in myself because I chose this profession.                            | 147.2 | 295            | .617 | .91 |
| 18   | I can succeed important and beneficial things for humanity by means of my profession.                 | 146.7 | 302            | .563 | .91 |
| 19   | I think that my abilities are not suitable for my profession.   | 147.1 | 300            | .554 | .91 |
| 20   | I think that my profession has a brilliant future.  | 147.0 | 297            | .505 | .91 |
| 21   | I consider changing my profession.  | 147.1 | 298            | .557 | .91 |
| 22   | I believe that my profession cannot meet my needs.  | 147.6 | 302            | .339 | .91 |
| 23   | I wish I had a profession that I can proudly tell.  | 147.7 | 302            | .256 | .92 |
| 24   | I will pursue my profession because I want to.  | 146.8 | 301            | .562 | .91 |
| 25   | When I receive a negative critique about my profession, I have the tendency to perceive it worthless. | 148.1 | 312            | .059 | .92 |
| 26   | I can advocate my profession easily if needed.  | 146.8 | 301            | .6   | .91 |
| 27   | I think my interests are not suitable to my profession.   | 147.3 | 299            | .497 | .91 |
| 28   | I think my profession is prestigious.   | 147.1 | 296            | .543 | .91 |
| 29   | I look as if I enjoy my profession, although I do not.  | 147.6 | 300            | .374 | .91 |
| 30   | My profession has the attributes that my ideal profession would have.                                 | 147.0 | 295            | .656 | .91 |
| 31   | I can perform well my professional responsibilities   | 146.8 | 304            | .506 | .91 |
| 32   | I think my standards of life is better than other professionals                                       | 147.4 | 301            | .341 | .91 |
| 33   | I think I have some professional deficiencies   | 147.3 | 307            | .265 | .91 |
| 34   | I think people do not want to meet me   | 147.0 | 303            | .431 | .91 |
| 35   | I think I am a reasonably good teacher  | 147.0 | 304            | .448 | .91 |
| 36   | In my opinion I can bring about a positive change in students' life                                   | 146.8 | 305            | .465 | .91 |
| 37   | People do not value me as a teacher   | 147.1 | 305            | .34  | .91 |

As the data in Table 1 depicts, statistics of each item, including their mean values, variance reliability and item total correlation, was good enough to retain all items. Hence, a principal component analysis was run to ascertain the factor structure that would emerge and how items would load on each factor. The factor loading values ranged from .265 to .666 and all values were statistically significant at 0.5 level (Table 2).

**Table 2.** Factor loading and reliability coefficient of revised scale

| Questions   | A    | B    | C    | D    | E    |
|---|------|------|------|------|------|
| Q: 1 I deserve better professions than my current one.  | .452 |      |      |      |      |
| Q: 4 I cannot respond proudly when my profession is asked.  | .382 |      |      |      |      |
| Q: 6 I chose my profession reluctantly.   | .443 |      |      |      |      |
| Q: 10 Because of a preference error, currently I hold a profession that I do not want.                      | .508 |      |      |      |      |
| Q: 12 I could not yet adopt the values of my profession   | .494 |      |      |      |      |
| Q: 15 I despise my profession.  | .406 |      |      |      |      |
| Q: 17 There are times I live conflict in myself because I chose this profession.                            | .509 |      |      |      |      |
| Q: 19 I think that my abilities are not suitable for my Profession.   | .480 |      |      |      |      |
| Q: 21 I consider changing my profession.  | .675 |      |      |      |      |
| Q: 22 I believe that my profession cannot meet my needs.  | .418 |      |      |      |      |
| Q: 27 I think my interests are not suitable to my profession.   | .605 |      |      |      |      |
| Q: 29 I look as if I enjoy my profession, although I do not.  | .381 |      |      |      |      |
| Q: 2 My profession is very important for me.  |      | .659 |      |      |      |
| Q: 5 I think I can be productive and efficient in my Profession.  |      | .798 |      |      |      |
| Q: 9 I respect my profession a lot.   |      | .786 |      |      |      |
| Q: 11 I think my profession is a preferred and desired Profession.  |      | .697 |      |      |      |
| Q: 13 I am happy with my profession.  |      | .657 |      |      |      |
| Q: 16 I can give myself emotionally to my profession.   |      |      | .51  |      |      |
| Q: 18 I can succeed important and beneficial things for humanity by means of my profession.                 |      |      | .718 |      |      |
| Q: 20 I think that my profession has a brilliant future.  |      |      | .503 |      |      |
| Q: 24 I will pursue my profession because I want to.  |      |      | .707 |      |      |
| Q: 26 I can advocate my profession easily if needed.  |      |      | .742 |      |      |
| Q: 28 I think my profession is prestigious.   |      |      | .644 |      |      |
| Q: 30 My profession has the attributes that my ideal Profession would have.                                 |      |      | .686 |      |      |
| Q:31 I can perform well my professional responsibilities  |      |      | .702 |      |      |
| Q:32 I think my standards of life is better than other professionals  |      |      | .361 |      |      |
| Q:35 I think I am a reasonably good teacher   |      |      | .559 |      |      |
| Q:36 In my opinion I can bring about a positive change in students' life                                    |      |      | .613 |      |      |
| Q: 8 I cannot concentrate on the intellectual activities that My profession requires.                       |      |      |      | .367 |      |
| Q:33 I think I have some professional deficiencies  |      |      |      | .770 |      |
| Q:34 I think people do not want to meet me  |      |      |      | .573 |      |
| Q:37 People do not value me as a teacher  |      |      |      | .504 |      |
| Q: 3 I don't find my profession to be suitable for my Personality.  |      |      |      |      | .693 |
| Q: 7 My profession is a part of myself.   |      |      |      |      | .617 |
| Q: 14 My profession has the attributes to affect people.  |      |      |      |      | .649 |
| Q: 23 I wish I had a profession that I can proudly tell.  |      |      |      |      | .479 |
| Q: 25 When I receive a negative critique about my profession, I have the tendency to perceive it Worthless. |      |      |      |      | .428 |

A= Acceptance of profession, B= Pride in the profession, C=value of the profession, D= Belief in professional capabilities, E= Belief in functionality of profession



Table 2 reflects the loading of items on five factors. After due deliberation and in consultation with senior academicians in the field, researchers decided to label Factor 1: Acceptance of profession; Factor 2: Pride in profession; Factor 3: value of profession; Factor 4: Belief in professional capabilities; and Factor 5: Belief in functionality of profession. The summary of statistics pertaining to these five factors and the instrument as a whole is given in table 3.

**Table 3.** Mean score, standard deviation and reliability coefficient of five factors

| Factors                               | Item# | Mean   | SD    | Reliability | Mean Correlation |
|---------------------------------------|-------|--------|-------|-------------|------------------|
| Acceptance of profession              | 12    | 46.89  | 7.40  | .830        | 0.53             |
| Pride in the profession               | 5     | 22.29  | 3.20  | .851        | 0.42             |
| Value of the profession               | 11    | 46.91  | 6.40  | .878        | 0.45             |
| Belief in professional capabilities   | 4     | 15.99  | 2.54  | .587        | 0.34             |
| Belief in functionality of profession | 5     | 19.09  | 3.64  | .613        | 0.31             |
| Overall                               | 37    | 151.19 | 17.79 | .954        |                  |

The above table shows the reliability coefficient of the 37-item scale as a whole and each component factor along with its mean correlation. The mean correlation exhibits a positive relationship between all the factors.

## 5. Conclusion

As mentioned in the early part of this paper, the original Aricak scale was in Turkish and when the English version was administered to the Pakistani sample, it did not yield an acceptable reliability value. Thus, the failure of English version of Aricak's professional self esteem scale highlights the importance of adapting instruments to the Pakistani context. It was also deemed necessary to ensure that concepts and constructs within an instrument are similar across the original and target language, time and context. Hence, an elaborate multi-step process as suggested by Gjersing *et al* (2010) was adopted to adapt the Aricak scale for use with the Pakistani sample so that the findings of the study are not misleading.

Hence, the scale was translated into the national language Urdu, which, despite an improved reliability, fell short of the desirable range. However, a combined version of the scale containing

both English and Urdu statements along with seven additional items was found to be more reliable. Similarly, in the original scale, 30 items loaded on three factors. Keeping in view the cultural requirements of the local context in terms of teachers' feelings, expectations, aspirations, and perceived self-worth in the educational environment of Pakistan, seven more items were added to the scale. A principal component analysis run on the resulting 37-item scale, gave rise to a five factor structure. Hence, attempting to replicate the original 30-item scale with the Pakistani sample was found to be unsuccessful and unreliable.

On the other hand, the revised 37-item scale was found to be a valid instrument to measure the self-esteem of secondary school teachers, particularly those working in public schools in Pakistan. During the last few years, there has been mounting criticism against the Pakistani public education system with reference to students' achievement in comparison with that of private schools. Teachers have to bear the blame of low performance of the public school system, and there are various reports (Vazir & Retallick, 2007; Jan, Khan, Khan, Khan & Saif, 2015), that indicate that the general self-esteem of teachers has not been high. As such, there is a dire need to conduct a research on this vital aspect of teachers' perceived self worth so that measures can be adopted to raise the quality of instruction and teachers' performance in public schools which offers education to a large sector of the society which cannot afford private education.

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