Cultural Adaptation and Validation of the Self-Efficacy Scale for Higher Secondary School Students of Odisha

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Abstract  
Self-efficacy is a potential measure to develop the capacities of higher secondary school students for producing desired results. Hence, the study of self-efficacy at this level is of utmost importance. In this present study, an attempt is made to culturally adapt the standardized self-efficacy scale of Sherer and Maddux (1982) for the higher secondary school students of Odisha. For this purpose, a sample of 135 higher secondary school students was taken randomly, and ten teachers were taken purposively. Both preliminary and final pilot study was conducted by collecting primary data. Both forward and backward translation was done in consultation with experts. The testing for 'comparability of language,' the 'similarity of interpretation,' and the 'degree of understanding' of the translated scale were measured and found higher scores in all these domains. The psychometric properties of the scale were estimated, i.e., Cronbach alpha reliability of the whole scale 0.85 and split-half reliability of 0.79, which revealed high internal consistency of the scale. The factor analysis was made by following principal component analysis of varimax rotation and Kiser normalization, which extracted four principal components, and the implications of the study were discussed.

Keywords: Self-efficacy scale, Translation of tool, Cultural adaptation, Validation of tool and Item analysis

Introduction  
Secondary education plays a vital role for the students in fostering their developmental characteristics, i.e., physical, mental, social, and emotional dimensions. In the secondary level of education, the students experience drastic changes in their structural and functional perspectives and also face various challenges relating to their developmental characteristics. Generally, the students at the secondary level and higher secondary level are considered as adolescents, where they experience anxiety, frustration, worries relating to social context, and peer group relationship. In this stage, adolescents learn to cope with situational and environmental problems. To cope with these difficulties, all-round balanced development among adolescents is highly needed, which helps them to accomplish their goals in an appropriate manner. In this context, the self-efficacy of the adolescents also plays a vital role, which helps them to accomplish their expected outcomes effectively by facilitating decision making among them. It is a fact that in the adolescent stage, the developmental characteristics among students become very high. Still, due to certain difficulties and problems, all the adolescence become unable to apply
their knowledge and ideas properly, in this context self-efficacy help the adolescents to make a plan, fix goals, and accomplish desired outcomes effectively. So, it can be said that an individual’s self-efficacy strongly determines his/her strategies to improve performance (Heslin & Klehe, 2006). In this regard, self-efficacy is the faith of a person in his/her abilities and capacities to produce expected learning outcomes (Hill, 2002). Self-efficacy is closely related to the self-regulation capacity of the students, which develops their motivation level and willingness to learn in all circumstances (Murphy & Alexander, 2000). Self-efficacy is also primarily concerned with metacognition, which is ‘thinking about own thinking and regulating the cognitive process’ (Metcalf & Shimamura, 1994). Self-efficacy helps the students to handle their difficulties by effectively utilizing their available resources and foster their academic performances (Dweck, 1999). The social cognitive theory of Bandura is the theoretical framework for self-efficacy (Bandura, 2001). Self-efficacy has proposed all the dimensions of behavioral changes through a universal mechanism, i.e., ‘modification of individuals’ expectation of personal mastery and success’ (Bandura, 1977, 1982). Empirical researches on self-efficacy have revealed a positive relationship between self-efficacy and psychological therapeutic changes in an individual’s behavior (Bandura, 1977; Bandura, Adams, & Beyer, 1977; Bandura, Adams, Hardy & Howells, 1980). However, it can be said that self-efficacy is a potential measure to develop the capacities of higher secondary school students for producing desired results. Hence, the study of self-efficacy at this level is of utmost importance. The assessment of self-efficacy needs some sorts of scales based on the dimensions of self-efficacy beliefs.

Research Instruments in India to Measure Self-Efficacy

The self-efficacy of students and teachers can be measured with the help of a scale; in this regard from the Indian context, some kinds of self-efficacy scale have been developed. The catalog of the National Psychological Corporation of Agra, India, reveals that self-efficacy scales have been developed both in English and Hindi language. The self-efficacy scale of A. K. Singh and Shruti Narain consisted of 20 items with ‘self-confidence, efficacy, expectation, positive attitude outcome expectation’ dimensions of self-efficacy meant for the students with the age group of 12 or 12+. Another self-efficacy scale was developed by G. P. Mathur and R. K. Bhatnagar consisting of 22 items with eight dimensions viz. ‘self-regulatory skills, self-influence, self-confidence, social achievement, self, self-evaluation, self-esteem, and self-cognition,’ this scale was meant for the students with the age group of 14+. The students’ self-efficacy scale was developed by S. Dahiya and N. Kumari, consisting of 35 items with five dimensions, i.e., ‘physical, social, emotional, academic, and spiritual.’ Another self-efficacy scale was developed by S. Dhar and U. Dhar, having 35 items divided into six dimensions viz. ‘credible, assertion, enduring, progression, self-confidence, and commitment.’ The research study of Janghel and Srivastava (2018) on the psychometric properties of the self-efficacy scale in the Hindi language revealed that ten items of the scale were significantly loaded in two factors and the Cronbach alpha reliability was 0.80. The scale was meant for the students with the age range of 14-18 (Janghel & Srivastava, 2018). Like these self-efficacy scales for students, for teachers also such scales were developed and validated in the Indian context both in Hindi and English language. But unfortunately, the researchers did not find any self-efficacy scale available in Odia language. Therefore an attempt was made for cultural adaptation and validation of the self-efficacy scale of Sherer and Maddux (1985) in Odia language in the context of Odisha state. Outside Indian context also various self-efficacy tools were found with cultural adaptation in their regional language.

The Rationale of the Study

Self-efficacy is considered as the beliefs of the students about their capabilities for producing desired results. In the educational context, it is the beliefs of the students about the capacities and abilities of the students to produce the results that they want to produce (Bandura, 1977). It also reflects the students’ confidence in knowing their potentialities to monitor and control their motivation, behavior, and social environment in a socially desirable way.
The study of students’ self-efficacy is of utmost importance because this develops beliefs among the students about their academic practices and enable them to know about their strength and weakness, and also helps to minimize their weakness by developing strength to a great extent. Moreover, self-efficacy capacity among secondary school students strengthens their academic achievements and desires to achieve higher-order goals. In the present study, the effort is taken by the investigators to translate the self-efficacy scale of Sherer & Maddux (1982) to Odia language for cultural adaptation in the state of Odisha. Considering the educational implications of the self-efficacy, an attempt was taken for cultural adaptation and validation of the self-efficacy scale in Odia language for higher secondary school students of Odisha. So far as related literature available in Odisha in terms of self-efficacy scale is concerned, the researchers did not find any tool on self-efficacy in Odia language. Still, there may be such a tool in unpublished form, so that researchers may not have found. In the study, every item of the self-efficacy scale has been translated with a consultation to language expert and subject expert from Odisha, and standard procedures have been followed for its validation and standardization in Odisha.

Objectives of the Study
1. To translate the English version of the self-efficacy scale to Odia language
2. To study comparability of language, the similarity of interpretation and degree of understandability of the Odia version of the self-efficacy scale
3. To study the validity and reliability of the Odia version of the self-efficacy scale
4. To conduct a factor analysis of the scale through the principal component method

Self-Efficacy Scale of Sherer and Maddux (1982)
The study of Sherer and Maddux (1982) on the self-efficacy scale revealed that the scale had two sub-scales that resulted through factor analysis viz. ‘general self-efficacy’ and ‘social-efficacy.’ The general self-efficacy subscale consisted of 17 items, and the social self-efficacy subscale consisted of 6 items. They confirmed the conceptual relationship between the two subscales and personality measures like ‘locus of control, personal control, social desirability, ego, strength, interpersonal competence, and self-esteem,’ which provided construct validity of the scale. The original version of the scale had 36 items in total, after factor analysis and item analysis, the final version of the scale had 23 items in total. The Cronbach alpha reliability of the General Self-efficacy subscale was 0.86, and the Social self-efficacy scale was 0.71, which revealed that the scale had high internal consistency. In the scale, both positive and negative items were also there, and for the negative items, the scoring was reversed (Sherer & Maddux, 1982).

Translation of SES to Odia Language
The investigator took permission by mail from the developer of the self-efficacy scale before translation and validation. After getting permission, standard procedures were followed for cultural adaptation and validation, which are mentioned below.

Forward Translation
The forward translation refers to the translation of each item from its original language (English) to the target language (Odia) by minimum two independent translators, where usually bilingual translators are preferred (Hendricson et al., 1989; Guillemin, Bombardier, & Beaton, 1993; Tsang, Royse, & Terkawi, 2017; Beaton et al. 2007). In this study, similarly, two independent translators were involved, where one translator was aware and knowledgeable about the concepts of the scale, and the other provided translation resembling the original items. The translation of the two translators was compared, and essential modifications were made where discrepancies were found.

Backward Translation
The backward translation refers to the independent back translation, i.e., from the target language (Odia) to the original language (English) for ensuring the accuracy and consistency of each item, this was also done by taking two independent translators having literature background and linguistic experience, where the unclear and ambiguous words were modified (Guillemin, Bombardier, & Beaton, 1993; Beaton et al. 2007).
Preliminary Pilot Study and Revision of the Scale

The preliminary pilot study was conducted by taking purposively selected a small group of higher secondary school students, i.e., 10-20 students of Lakhanpur block in the district of Jharsuguda, Odisha. In this pre-pilot study, each of the respondents was asked to elaborate their thoughts verbally regarding each item of the scale, from which the investigators came to know about their understanding of the items and the accuracy of the translation.

Final Pilot Study and Validation

The final pilot study was consisted of randomly selected 135 higher secondary school students of Lakhanpur block in the district of Jharsuguda, Odisha. The demographic characteristics of the respondents were noted down for further study. In this study, ten teachers were also selected from that area to rate the translated items in terms of comparability, similarity, and understandability.

Validation of Translated Version of SES

Test of Comparability of Language, Similarity of Interpretation & Degree of Understandability

The test of comparability of language (CoL), the similarity of interpretation (SoI), and degree of understandability (DoU) was studied by following the procedures prescribed by Sperber et al. (1994) and Sperber (2004), where all the items of the translated version of the scale were listed down and on the right-hand side, options were given following Likert type with four-point scale, although Sperber (2004) used seven-point of scaling procedure (Sperber et al., 1994; Sperber, 2004). The scoring pattern was 1=extreme, 2=moderate, 3=low, 4=not at all, where the items having more one value represented having high CoL, SoI, and SoU, and items having two values represented low. Finally, the items having four values represented not all comparable, interpretable, and understandable. The following table makes it clear.

| Item No | Extreme CoL (1) | Moderate CoL (2) | Low CoL (3) | Not at all CoL (4) |
|---------|-----------------|-----------------|-------------|-------------------|
|         |                 |                 |             |                   |
| 01      |                 |                 |             |                   |
| 02      |                 |                 |             |                   |
| 03      |                 |                 |             |                   |
| 04      |                 |                 |             |                   |
| 05      |                 |                 |             |                   |
| 06      |                 |                 |             |                   |
| 07      |                 |                 |             |                   |
| 08      |                 |                 |             |                   |
| 09      |                 |                 |             |                   |
| 10      |                 |                 |             |                   |

@Same pattern was followed for all the 23 items of the translated self-efficacy scale

The items for which more 2- or 3-point scores were received were modified for the final version, and the items in which more 1-point scores were received were kept as usual without modification. Finally, the mean scores for each item were calculated based on the responses of the experts.

| Item No | Comparability of Language | Similarity of Interpretation | Degree of Understandability | N |
|---------|---------------------------|-----------------------------|-----------------------------|---|
|         | Mean | SD  | Mean | SD  | Mean | SD  |         |
| 01      | 1.2000 | .42164 | 1.5000 | .52705 | 1.5000 | .70711 | 10 |
| 02      | 1.2000 | .42164 | 1.5000 | .52705 | 1.4000 | .51640 | 10 |
| 03      | 1.4000 | .51640 | 1.3000 | .48305 | 1.1000 | .31623 | 10 |
| 04      | 1.3000 | .48305 | 1.4000 | .51640 | 1.2000 | .42164 | 10 |
| 05      | 1.2000 | .42164 | 1.4000 | .51640 | 1.2000 | .42164 | 10 |
| 06      | 1.2000 | .63246 | 1.4000 | .69921 | 1.2000 | .42164 | 10 |
| 07      | 1.5000 | .70711 | 1.3000 | .48305 | 1.2000 | .42164 | 10 |
| 08      | 1.3000 | .48305 | 1.5000 | .52705 | 1.2000 | .42164 | 10 |
| 09      | 1.3000 | .48305 | 1.4000 | .51640 | 1.4000 | .69921 | 10 |
| 10      | 1.2000 | .63246 | 1.3000 | .48305 | 1.3000 | .48305 | 10 |

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The table-2 represents the mean and standard deviation of each item of the translated version of the self-efficacy scale concerning the CoL, the SoI, and the DoU. The range of mean scores reveals between 1 to 2, which makes it clear that the items of the tools were having adequate CoL, the SoL, and the DoU. The following figure also depicts the information on the table more clearly.

**Figure 1: Mean score representing the test of CoL, SoI and DoU**

![Figure 1: Mean score representing the test of CoL, SoI and DoU](image)

Face Validity

‘The face validity refers to the degree to which a test appears to measure what it purports to measure’ (Gay, 1990, p.130). In this study, the face validity of the translated self-efficacy scale in Odia language was estimated by taking the views of the experts taken for validation purpose.

Content Validity

‘The content validity is the degree to which a test measures an intended content area with item validity, where the item validity refers is concerned with whether the test items represent measurement in the intended content area’ (Gay, 1990, p. 129). The content validity of the translated version of the self-efficacy scale was studied by following the opinion of the experts on the relevance of each item in terms of the content area of self-efficacy.

Internal Consistency Reliability of the Scale

The internal consistency of the translated version of the self-efficacy scale was calculated with the help of Statistical Package for Social Science-23 (SPSS-23). The Cronbach alpha reliability and split-half reliability both are used as important measures of the internal consistency of a research instrument.

Cronbach’s Alpha & Split Half Reliability

The Cronbach alpha reliability index and split-half reliability value of the translated version of the scale obtained from the output of SPSS analysis are presented below.
Table 3: Cronbach Alpha and the Split-half Reliability Index of Scale

| S. No. | Subscale                  | No. of Items | N    | Cronbach Alpha | Split Half Reliability |
|--------|---------------------------|--------------|------|----------------|------------------------|
| 1      | General self-efficacy     | 17           | 135  | 0.813          | 0.850                  |
| 2      | Social self-efficacy      | 06           | 135  | 0.670          | 0.746                  |
| Overall Scale |                     | 23           | 135  | 0.846          | 0.788                  |

The results revealed that both the subscales of the SEF were having high internal consistency. The first subscale, i.e., General self-efficacy was having 0.85 Cronbach alpha reliability in total, and the second sub-scale was having 0.79 reliability, which revealed that the translated version of the self-efficacy scale was highly reliable having high internal consistency.

Table 4: Item-wise Mean, Standard Deviation and Number of Cases

| Items   | Mean | SD   | N    | Items   | Mean | SD   | N    |
|---------|------|------|------|---------|------|------|------|
| Item1   | 4.69 | .617 | 135  | Item13  | 4.56 | .665 | 135  |
| Item2   | 1.69 | .796 | 135  | Item14  | 1.53 | .656 | 135  |
| Item3   | 4.68 | .581 | 135  | Item15  | 4.55 | .666 | 135  |
| Item4   | 1.69 | .842 | 135  | Item16  | 1.53 | .656 | 135  |
| Item5   | 1.60 | .745 | 135  | Item17  | 1.55 | .655 | 135  |
| Item6   | 1.63 | .688 | 135  | Item18  | 1.62 | .668 | 135  |
| Item7   | 1.60 | .693 | 135  | Item19  | 4.56 | .642 | 135  |
| Item8   | 4.56 | .665 | 135  | Item20  | 1.64 | .652 | 135  |
| Item9   | 4.55 | .666 | 135  | Item21  | 4.56 | .642 | 135  |
| Item10  | 1.59 | .683 | 135  | Item22  | 1.53 | .667 | 135  |
| Item11  | 1.62 | .742 | 135  | Item23  | 4.57 | .641 | 135  |
| Item12  | 1.64 | .685 | 135  |         |      |      |      |

The table-4 depicts information about the item total statistics of the translated version of the self-efficacy scale concerning the mean scores, standard deviation, and N. As mentioned earlier, the scale had both positive and negative items in both subscales, so item wise mean and standard deviation is presented there separately. The data revealed that the standard deviation of each item is near to 1, and the mean is between 4 to 5 for positive items and 1 to 2 for negative items with 135 number of cases in total.

Table 5: Summary Item Statistics

|                     | Mean   | Minimum | Maximum | Range  | Maximum / Minimum | Variance   | N of Items |
|---------------------|--------|---------|---------|--------|-------------------|------------|------------|
| Item Means          | 2.772  | 1.526   | 4.689   | 3.163  | 3.073             | 2.217      | 23         |
| Item Variances      | .464   | .338    | .708    | .370   | 2.095             | .007       | 23         |
| Inter-Item Correlations | .190  | -.184   | .861    | 1.045  | -4.666            | .056       | 23         |

The table-5 depicts information about the summary of item statistics presented in table-4. The summary reveals the minimum mean score, i.e., 1.52 and maximum mean score, i.e., 4.69, so the range is depicted as 3.16 in terms of the item means. So far as the item variance is concerned, the minimum value is 0.338, and the maximum is 0.708, and the range is 0.370. Finally, the inter-item correlation reveals a minimum value of -0.14 and a maximum 0.190 having 1.05 range for all the 23 items.

Principal Component Analysis

The principal component analysis was done for dimension reduction and finding the pattern of the
data of high dimensions. So, to undertake factor analysis through the principal component method, first of all, the KMO and Bartlett’s test was used to study sampling adequacy and sphericity after that principal component analysis was done with varimax rotation method.

The table shows two tests that indicate the suitability of the data for structure detection. The KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy indicates the proportion of variances in the variables that might be caused by underlying factors. As high value (near to 1) indicates the use of factor analysis and the KMO value is 0.862 is found here, so it can be concluded that factor analysis is very useful for this data. On the other hand, Bartlett’s test of sphericity value is showing 154867, which is significant at 0.01 level of significance reveals that factor analysis is very much useful for this data.

Table 6: KMO and Bartlett’s Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | .862 |
| Bartlett’s Test of Sphericity | Approx. Chi-Square | 1548.660 |
| df | 253 |
| Sig. | .000 |

Table 7: Total Variance Explained

| Component | Initial Eigenvalues | Extraction Sums of Squared Loadings | Rotation Sums of Squared Loadings |
|-----------|---------------------|------------------------------------|----------------------------------|
|           | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1         | 6.327 | 27.507 | 27.507 | 6.327 | 27.507 | 27.507 | 5.659 | 24.605 | 24.605 |
| 2         | 4.469 | 19.430 | 46.937 | 4.469 | 19.430 | 46.937 | 4.232 | 18.400 | 43.005 |
| 3         | 1.377 | 5.986 | 52.923 | 1.377 | 5.986 | 52.923 | 2.064 | 8.975 | 51.980 |
| 4         | 1.162 | 5.051 | 57.973 | 1.162 | 5.051 | 57.973 | 1.379 | 5.994 | 57.973 |
| 5         | .952  | 4.140  | 62.113 |
| 6         | .918  | 3.991  | 66.105 |
| 7         | .813  | 3.534  | 69.638 |
| 8         | .792  | 3.445  | 73.083 |
| 9         | .765  | 3.327  | 76.410 |
| 10        | .710  | 3.085  | 79.495 |
| 11        | .602  | 2.616  | 82.111 |
| 12        | .577  | 2.510  | 84.621 |
| 13        | .552  | 2.399  | 87.020 |
| 14        | .527  | 2.293  | 89.313 |
| 15        | .436  | 1.896  | 91.209 |
| 16        | .383  | 1.667  | 92.876 |
| 17        | .362  | 1.574  | 94.450 |
| 18        | .309  | 1.344  | 95.793 |
| 19        | .253  | 1.100  | 96.893 |
| 20        | .243  | 1.058  | 97.951 |
| 21        | .211  | .919   | 98.870 |
| 22        | .193  | .841   | 99.711 |
| 23        | .067  | .289   | 100.000 |
Extraction Method: Principal Component Analysis

The table 7 depicts information on the total variance explained in the data set of principal component analysis. There are three dimensions, i.e., initial eigenvalues, extraction sums of squared loadings, and rotation sum of squared loadings. The total column f f irst dimension gives the eigenvalue in the original variables accounted for each component; the % of variance gives the ratio expressed in % accounted for by each component to the total variance in all of the variables. The cumulative % column gives the percentage of variance accounted for by the first n components. The next dimension of the table explains extracted components, which explains the % of the variability in the original variables. The last dimension, i.e., rotation, maintains the cumulative % of variation explained by the extracted components. However, the results of the total variance explained revealed that four components were extracted during factor analysis.

The figure-2 depicts the screen plot f f the factor analysis with principal components, which is used to determine the number of factors to retain in doing principal component analysis. The procedure of finding statistically significant factors of components using a screen plot is known as a screen test, as found by Cattel. (Cattle, 1966). The four factors extracted are as follows.

Figure 2: Screen Plot of Principal Component Analysis

Table 8: Component Transformation Matrix

| Component | 1     | 2     | 3     | 4     |
|-----------|-------|-------|-------|-------|
| 1         | .929  | -.094 | .354  | -.047 |
| 2         | .054  | .956  | .147  | .249  |
| 3         | -.365 | -.114 | .924  | -.029 |
| 4         | .021  | -.254 | .008  | .967  |

Table 9: Component Matrix and Rotation Component Matrix

| Item    | Component | Component | Rotated Component | Rotated Component |
|---------|-----------|-----------|-------------------|-------------------|
|         | 1         | 2         | 3         | 4         | 1         | 2         | 3         | 4         |
| Item1   | -.106     | .939      | -.111     | -.070     | -.008     | .938      | -.003     | .174      |
| Item2   | .652      | .088      | -.166     | .207      | .676      | -.011     | .092      | .196      |
| Item3   | -.048     | .566      | .031      | -.373     | -.033     | .637      | .092      | -.218     |
| Item4   | .622      | -.083     | .063      | -.056     | .595      | -.117     | .150      | -.102     |
| Item5   | .549      | .110      | .024      | .224      | .512      | -.007     | .234      | .217      |
| Item6   | .824      | .077      | -.148     | .006      | .824      | .012      | .167      | -.010     |
| Item7   | .818      | .009      | -.160     | -.062     | .818      | -.035     | .143      | -.092     |
| Item8   | -.140     | .315      | .034      | .589      | -.113     | .161      | .033      | .654      |
| Item9   | -.068     | .436      | -.094     | .649      | .009      | .269      | -.042     | .742      |
| Item10  | .704      | .014      | -.281     | -.009     | .757      | -.019     | -.008     | -.030     |
| Item11  | .793      | .032      | -.029     | -.036     | .748      | -.032     | .258      | -.064     |
| Item12  | .718      | .093      | -.236     | -.119     | .755      | .078      | .049      | -.119     |
| Item13  | .023      | .589      | .331      | -.058     | -.069     | .538      | .400      | .080      |
| Item14  | .579      | .075      | .174      | .137      | .482      | -.038     | .377      | .119      |
| Item15  | -.062     | .631      | -.083     | .037      | .007      | .609      | .005      | .198      |
| Item16  | .589      | -.053     | -.222     | -.209     | .621      | -.028     | -.006     | -.237     |
| Item17  | .693      | .016      | -.133     | .049      | .695      | -.048     | .126      | .023      |
The table 9 represents the component matrix and rotation component matrix through varimax with Kaiser normalization in the extraction method of principal component analysis. The component matrix shows the correlation between the variable and the components, which ranges from -1 to +1. The rotated components matrix, or sometimes referred to loadings, was also used as the output of the principal component analysis, which contains estimates of the correlation between each of the variables and the estimated components.

**Implications of the Study**

The present study has implications for teachers and stakeholders of education in terms of measuring the self-efficacy of the students, which is a psychological dimension for promoting students’ learning. In this present study, the self-efficacy scale developed by Sherer and Maddux (1982) was translated into Odia language, and validation, cultural adaptation, and factor analysis were made. So, the teachers and stakeholders of Odisha can now use this tool from their cultural perspective. This tool is having high internal consistency with four factors loadings, so this tool will be very beneficial on the part of the teachers to measure the self-efficacy among their students and take essential measures to bring all-round development in them. As mentioned earlier, self-efficacy is closely associated with the learning performance of students in educational theory and practices; it is very beneficial for the teachers, particularly to enable the students to gain an idea about their strengths and weakness. This study has implications for the policymakers also as the policymaker frames principles for students learning. So, from an educational point of view, this tool is highly beneficial for the stakeholders of education of Odisha state, as such kind of tool was not available earlier.

**Conclusion**

The present study is empirical as primary data was collected, which is based on cultural adaptation and validation of the self-efficacy scale for the students of the higher secondary school of Odisha state. So far as the results of the rigorous analysis are concerned, the translated version of the scale had high internal consistency and content validity too. Also, the tool has four principal components, as depicted in the table of principal component analysis. The self-efficacy scale of Odia language also fulfills all the psychometric properties and equally helps to measure general self-efficacy dependent on past experiences and social self-efficacy based on the abilities to maintain social relations. So, it can be said that this self-efficacy scale is now widely applicable in all parts of Odisha for measuring the self-efficacy abilities of students in terms of both general and social self-efficacy.

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No potential conflict is reported in this study.

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