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# Validating the SACIE-R Scale for the Indigenous and International Teachers in Inclusive Education (IE): A Recommended Scale for Researchers Pursuing Research in Inclusive Education

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**KEYWORD**
*Validating, SACIE-R Scale, Inclusive Education in Pakistan, Confirmatory Factor Analysis, Exploratory Factor Analysis*

**ABSTRACT**
*Experts in the inclusive education (denoted as IE in the later parts) field state that education is the right of every child, therefore, IE is extremely important around the globe. The same is the case for Pakistan, therefore, measuring the Pakistani indigenous school teachers' attitudes towards IE is an important fact for which providing a valid IE scale is really an important task. Thus, the present research tested and validated the SACIE-R scale of Forlin et al. (2011) by using the EFA and CFA through SPSS and AMOS-24. This study was cross-sectional, quantitative in nature, applied the purposive sampling technique and data was collected through an online survey having 500 Pakistani school teachers (males = 302, females = 198). Our validated model of fit was best suited to the current study for the SACIE-R scale and revealed that the said scale can be used like the original scale with the three original factors, five items for each. All three original factors were treated in one model. The CFA model also revealed a good fit and significantly approves the factor structure generated in EFA. Since the model was the best fit for the current study, therefore, neither factor nor any item was deleted but the original SACIE-R scale was retained in the full sense. The Alpha reliability coefficient of the main scale (α=.75) with sub-dimensions "sentiments" (α=.70), "attitudes" (α=.78), and "concerns" (α=.72) was satisfactory. It is recommended that indigenous researchers, school, college, and University teachers as well as research students should use this scale for the IE in Pakistan and in other countries in different contexts.*

## INTRODUCTION

In inclusive education (inclusive education: denoted as IE in the later parts) teachers must be familiar with and answer back to the diverse necessities of children by educating them to harmonize educational dissimilarities and make sure all for effective learning (Hayes & Bulat, 2017). Thus, the school should involve in the process of inclusion. Actually, on both national and international levels, the perspective of inclusion is a center of concern. This concern particularly involves teachers, because they have to manage classrooms with a variety of needs e.g., students' disabilities and shortfalls in school activities. By definition, IE is termed as that some particular students should add to regular schools or classes e.g., a review study was conducted on 640 articles (published between 2005 and 2015), that were collected from the International Journal of Inclusive Education, which Messiou (2017) brought this fact that 40% of the papers revealed a particular emphasis on learners with SENs (special educational needs). While the rest of the research papers studied other students. According to the qualitative results of Messiou (2017), only 8% of the articles emphasized all students with diverse needs. These findings were also supported by Nilholm and Goransson (2017). However, IE in a current research paper is consistent with Lozano et al. (2022) and Shyman (2015) such as "all children have a right to access and to take admission, participate and gain success in their indigenous regular educational institutes/schools". Multiple components such as adapted curriculum, adjusted teaching ways, and alternative evaluation tactics are involved in the inclusion process. Although, teachers used to be quite alone while handling such type of classrooms, so now there must be speech therapists, teachers who specialized in special education, or students' assistants in the inclusive educational institutes (Lozano et al., 2022; Warnes et al., 2022). There is a lot of discussion on the IE and the previous literature already uncovered the importance of IE but what is missing in the IE field is the valid scale, especially in the Pakistani context, therefore we came up with this study. Thus, the purpose of the present study was to validate a scale that measures Pakistani teachers' attitudes towards IE, that's why this section of the

current study has also portrayed a review of published scales regarding IE. These reviews with the research gaps especially in the Pakistani context are mentioned below. It is also mentioned in each review that's why it was so important to provide a valid scale in the Pakistani context.

In 1995, Wilczenski constructed and validated the ATIES (attitudes towards inclusive education scale) on school teachers in the USA which consisted of 16 items with a unidimensional approach using the Rasch analysis. Although the scale has good statistical and psychometric properties, but this scale reflects generally Western beliefs and perceptions that discriminate the local Asian (Pakistani) perception, therefore, we intended that we should have our own tested and validated scale for the Pakistani community in the IE field.

In 2002, Sharma and Desai constructed the CIES (Concerns about Inclusive Education Scale) in India by sampling primary school principals and teachers. This scale consisted of 21 items with four factors i.e., concerns about resources, concerns about acceptance, concerns about academic standards, and workloads concern. The scale captures principals' and teachers' concerns. Although this scale is in an Asian context, but since India is a populous country in the world and is different from Pakistan in culture and religious beliefs, therefore, it might be possible that the scale might not have the best fit in Pakistan. So, we intended to provide the tested and validated scale to the indigenous Pakistani teachers and researchers for the execution of their research in an easy way.

In 2003, Hastings and Oakford constructed the IIQ (impact of inclusion questionnaire) among student teachers in the UK. The scale consisted of 23 items with four subscales named child with special needs themselves, other children in the classroom, the teachers, and the school or classroom environment. The scale had a good internal consistency of 0.65-0.81 Cronbach alpha reliability while no validity was reported for the IIQ. The scale had research gaps. This should undergo other statistical tests.

The PATIE questionnaire was constructed by Bailey in 2004 and was administered to school principals in Australia. This scale consisted of 24 items with five subscales with strong reliability and validity having sound psychometric properties by running factor analysis. PATIE captures the Western beliefs and perceptions that will not be a good fit for Asians, particularly in the Pakistani context. Thus, we intended to validate a scale with good psychometric procedures in the Pakistani sample.

The MATIES scale was constructed by Mahat in 2008 and was validated by primary and secondary school teachers in Victoria (Australia). This scale consisted of 18 items with three subscales with strong reliability and validity having sound psychometric properties. MATIES scale collects the beliefs of teachers concerning cognitive, affective, and behavioural domains related to IE. As the MATIES scale was validated in Western culture, so we felt a need to validate a questionnaire concerning IE in Pakistani culture.

TQ (teacher questionnaire) was developed by de Boer et al. (2012). This scale was validated only on primary school teachers and applied from a Dutch perspective. Though it was transformed to English for publication with 58 sample size among the population of the Netherlands. This scale consisted of 19 items with three subscales with weak to moderate construct validity while reliability was not reported. TQ collects the beliefs of teachers concerning cognitive, affective, and behavioural domains related to IE. As the TQ was also validated in a culture differing from Pakistan, so it was a need to validate a scale that measures IE conception from the Pakistani perspective.

TAIS was validated by Monsen et al. (2015) on 106UK school teachers with 20 items spread on 4 factors. Internal consistency was satisfactory to good while reported acceptable convergent validity. The TAIS carries a different attitude for the behavioural attitude factor, in which data is taken about exactly how teachers are willing to compromise students with specific disabilities, and ponders each of these complications through a range of severities. In relation to all the above concerns, there was a need to validate the IE scale in a culture where it was not measured before. We watched closely in the above reviews that all the scales were in contexts other than Pakistan. So, in Pakistan, where the school system confronts various obstacles, including a lack of resources and facilities, IE has emerged as a major governmental goal. Researchers established multiple approaches and scales to properly implement and analyzed IE conceptions, one of which is the (SACIE-R) scale.

Forlin et al. (2011) developed the SACIE-R scale as a tool for assessing teachers' attitudes toward inclusive education. The scale acknowledges that teacher attitudes are crucial in determining how IE initiatives turn out. Despite a student's skills, IE attempts to establish welcoming and fair learning settings that meet their different needs. The SACIE-R has been used to evaluate teachers' readiness to adopt inclusive practices highlighting key areas that need improvement.

Although the SACIE-R scale has been effectively used in a variety of cultural contexts, it is still important to be sensitive to cultural differences and adapt to the environment. Pakistan is a multicultural country with a rich culture that has been shaped by regional, socioeconomic, and

religious influences. The fabric of these cultural norms is closely intertwined with attitudes toward education and people with disabilities. To guarantee the SACIE-R scale is culturally suitable and relevant in the Pakistani context, it is necessary to retest and revalidate it.

Fewer research has been conducted in Pakistan to investigate IE practices. Khalid and Othman (2022) investigated the problems that teachers experience while adopting IE practices, emphasizing the necessity of knowing teachers' attitudes. According to the findings of the study, teacher training is a vital area that requires the attention of higher education specialists. With stronger management and training systems, teachers may be more inclusive. Moreover, teacher training is an important aspect of getting access to IE in Pakistani institutions, and it influences the growth and progression of teachers' views. To measure teachers' attitudes, the study employed the Forlin et al. (2011) questionnaire designed for Western contexts, which may not completely reflect the complexity of Pakistani teachers' views and practices.

A qualitative study in Lahore, Pakistan, investigated early childhood education (ECE) teachers' perspectives regarding classroom management practices in inclusive ECE classroom settings. Results indicated that most ECE teachers have favorable opinions towards teacher-directed classroom management practices that are seen to help manage inclusive early childhood education classroom settings. However, they believe that implementing these tactics will be difficult due to the presence of children with impairments (Tahira et al., 2020).

Another recent study intended to determine teacher opinions regarding the instruction of children with minor learning difficulties in Pakistan. The study discovered that teacher mindsets are a barrier to inclusive education and that students with minor learning difficulties must be accommodated in an inclusive classroom setting. The study collected data using a quantitative research approach and used Avramidis et al.'s (2000) study to assess teachers' attitudes.

In the Pakistani context, the scales used in earlier studies have limitations. To begin with, these measures are developed in Western contexts and may not adequately reflect Pakistan's cultural, social, and educational setting (Farooq & Malik, 2021; Zaman et al., 2022). Second, the language and cultural variations between the original setting of scale development and Pakistan may have an impact on the results' validity and reliability. Third, existing scales may not address the variety of characteristics that contribute to effective IE practices, especially given the unique problems that Pakistani school teachers confront (Zaman et al., 2022). Previous research utilizing measures produced in different cultural contexts has limitations that highlight the need for a SACIE-R Scale.

### Significance and Research Gap

Past literature about Pakistani teachers' conceptualization of IE is really very limited and most of the past studies fail to address if ever had existed any tested and valid scale for IE in Pakistan. Our study will provide such a scale that can help indigenous researchers in special and international researchers in general about IE. The current scale of Forlin et al. (2011) will contribute to the literature in support of IE in the Pakistani context, as we have seen that the most appropriate scale was not observed in the literature for the Pakistani context. Thus, we made up our mind that we should provide a scale that the indigenous researchers may use in their research theses, papers, and other areas. Our study will be filling the gap by providing a tested and valid scale in the Pakistani context. Through our study, the current scale of Forlin et al. (2011) will be exposed to a wide range of researchers in Pakistan. This scale will contribute to the policymakers as well who will make a policy regarding IE. Though this scale has satisfactory reliability and sound validation in cross-cultures but still these cultures are different from Pakistan in many aspects, therefore, the need to validate the SACIE-R scale in Pakistani culture was the major important outcome of the present study.

### Objectives of the Study

1. Provision of the tested and validated scale that measures the attitudes of school teachers working for IE in Pakistan.
2. Provision of the factorial structure through EFA and CFA with internal consistency reliability of the SACIE-R scale in a Pakistani sample of school teachers.

## METHODOLOGY

### Study Design

Since the present study data was in quantitative form and authors had to measure the attitudes of teachers about a specific phenomenon, therefore, the study used the non-experimental quantitative research design by excluding extraneous variables. Non-experimental quantitative research design best fits the study (Cohen et al. 2007) because through it authors can measure the teachers' attitudes about any kind of phenomenon (say it IE). Further, in quantitative research design, researchers can generalize the results over the population if the sample is quite enough (Creswell & Creswell, 2017). Moreover, the present scale validation study

was cross-sectional in nature. The data was collected with all research ethics being followed.

**Scale and Participants**

Originally the SACIE-R scale (Sentiments, Attitudes, and Concerns about Inclusive Education-Revised) was developed by Forlin et al. (2011) from the initial pool of 60 items. The original 60 items scale was then validated by running a series of surveys among the preservice teachers in countries like Hong Kong, Canada, India, and the USA. Finally, 15 items were extracted from the refined and final validated scale which were spread over three dimensions (i.e., sentiments, attitudes, and concerns) and were named SACIE-R. In the current research, authors took the SACIE-R and administered it to the general in-service teachers of primary, secondary, and higher secondary school teachers in Pakistan in different regions. The present study sample size was 500 (male: 302 and female: 198) and the purposive sampling technique was applied as it best suited the aim of this study. The complete detail of the sample is shown in Table 1. The inclusion criteria of the research participants included: Experienced school teachers (primary, secondary & higher secondary) with a minimum experience of 6 months up to more than 20 years whereas exclusion criteria were defined as: University teachers and fresh graduates with no experience.

**Ethical Considerations and Procedure**

The essential moral concerns that are directly linked to the nature of research were kept in mind during the whole process. This was maintained in a way that a consent form was prepared and attached to the survey so that respondents could see it before filling in the questionnaire. Data for this paper was collected through an online Google form by sharing the link to the survey participants via email, WhatsApp, and Facebook links. A brief document was also attached with the survey regarding the participation of the participants. It comprised the research aims. Participants were told that their participation in the study is confidential and voluntary and also that their data would be only used for academic purposes, and that their provided responses would be abandoned after the paper gets published. It was mentioned that respondents can withdraw from the study at any time they want. After reading and understanding the consent form, those participants who agreed participated in the current research by filling up the survey. The whole survey including the informed consent form, personal information of the participants, description, and items of the scale was prepared in the English Language as the sample of the present study was knowledgeable in the English language. The researcher's email address was also given in the survey; in case any participant has a query regarding the present research.

**Data Analysis**

IBM SPSS (statistical packages for social sciences) 24 version and AMOS (analysis of moment structures) 24 version software were applied to find out the present study objectives. First of all, data were transformed from an Excel sheet to an SPSS dataset. After that SPSS data sheet was prepared and data cleaning was done. After this step, a total of 500 samples were retained in the datasheet and analyzed. Alpha reliability coefficients of the scale along with subscales and EFA were determined through SPSS. While CFA and Model fit were determined through AMOS.

## RESULTS

**Participants' Demographic Information**

**Table 1**

*Demographic characteristics of participants*

| Variables | F | % |
|---|---|---|
| Sex | | |
| Male | 302 | 60.4 |
| Female | 198 | 39.6 |
| Age | | |
| 22-30 Years | 199 | 39.8 |
| 31-35 Years | 134 | 26.8 |
| 36-40 Years | 69 | 13.8 |
| 41-45 Years | 46 | 9.2 |
| 46-50 Years | 31 | 6.2 |
| Plus 51 Years | 21 | 4.2 |
| Province | | |
| Khyber Pakhtunkhwa | 198 | 39.6 |
| Punjab | 251 | 50.2 |
| Sindh | 2 | 0.4 |
| Baluchistan | 36 | 7.2 |
| Gilgit Baltistan | 2 | 0.4 |
| AJK | 11 | 2.2 |
| Teaching Level | | |
| Primary | 200 | 40 |
| Secondary | 206 | 41.2 |
| Higher Secondary | 94 | 18.8 |
| Teaching Experience in General Education | | |

| | | |
|---|---|---|
| 6 Months-1 Year | 54 | 10.8 |
| 2-5 Years | 154 | 30.8 |
| 6-10 Years | 138 | 27.6 |
| 11-15 Years | 76 | 15.2 |
| 16-20 Years | 31 | 6.2 |
| Over 20 Years | 47 | 9.4 |
| Total | 500 | 100 |

The findings show that among the 500 respondents, 302 (60.4%) were male, and 198 (39.6%) were females. Participants in a group of age 22-30 years (*n* = 199, 39.8%) were more than groups of age 31-35 years (*n* = 134, 26.8%), 36-40 years (*n* = 69, 13.8%), 41-45 years (*n* = 46, 9.2%), 46-50 years (*n* = 31, 6.2%) and above 51 years (*n* = 21, 4.2%). Participants from Punjab (*n* = 251, 50.2%) were more in numbers than participants from Khyber Pakhtunkhwa (*n* = 198, 39.6%), Baluchistan (*n* = 36, 7.2%), AJK (*n* = 11, 2.2%), Sindh and Gilgit Baltistan (*n* = 2, 0.4%). Participants with a secondary teaching level (*n* = 206, 41.2%) were more in numbers than participants with a primary teaching level (*n* = 200, 40%) and participants with a higher secondary teaching level (*n* = 94, 18.8%). Participants having 2 to 5 years of teaching experience in general education (*n* = 154, 30.8%) were more in numbers than participants having 6 to 10 years of teaching experience (*n* = 138, 27.6%), 11 to 15 years of teaching experience (*n* = 76, 15.2%), 6 months to 1 year of teaching experience (*n* = 54, 10.8%), over 20 years of teaching experience (*n* = 47, 9.4%) and 16 to 20 years of teaching experience (*n* = 31, 6.2%)

**Validity of the SACIE-R Scale by using EFA and CFA**

**Table 2**

*EFA, CFA and Model Fits for SACIE-R (N = 500)*

| Items | | EFA | CFA |
|---|---|---|---|
| | **Factor 1: Sentiments (Items=05) (α = 0.70)** | | |
| S1 | I find it difficult to overcome my initial shock when meeting people with severe physical disabilities. | .70 | .72 |
| S2 | I am afraid to look directly at a person with a disability. | .57 | .59 |
| S3 | I tend to make contact with people with disabilities briefly and I finish them as quickly as possible. | .73 | .51 |
| S4 | I would feel terrible if I had a disability. | .51 | .42 |
| S5 | I dread the thought that I could eventually end up with a disability | .68 | .43 |
| | **The proportion of Variance Explained for Factor 1** | **22.52%** | |
| | **Factor 2: Attitudes (Items=05) (α = 0.78)** | | |
| A1 | Students who have difficulty expressing their thoughts verbally should be in regular classes. | .82 | .75 |
| A2 | Students who frequently fail exams should be in regular classes. | .72 | .66 |
| A3 | Students who need an individualized academic program should be in regular classes. | .70 | .55 |
| A4 | Inattentive students should be in regular classes. | .74 | .71 |
| A5 | Students who require communicative technologies (e.g., Braille Braille/sign) should be in regular classes. | .67 | .51 |
| | **The proportion of Variance Explained for Factor 2** | **16.51%** | |
| | **Factor 3: Concerns (Items=05) (α = 0.72)** | | |
| C1 | I am concerned that my workload will increase if I have students with disabilities in my class. | .72 | .66 |
| C2 | I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom. | .45 | .34 |
| C3 | I am concerned that I will be more stressed if I have students with disabilities in my class. | .73 | .73 |

| | | | |
|---|---|---|---|
| C4 | I am concerned that Students with disabilities will not be accepted by the rest of the class. | .69 | .60 |
| C5 | I am concerned that I do not have the knowledge and skills required to teach students with disabilities. | .74 | .54 |
| | **The proportion of Variance Explained** | | **10.11%** |
| | **Total Amount of Average Variance Explained by all Factors** | | **49.14 %** |

| χ2/DF | NFI | CFI | RFI | TLI | RMSEA |
|---|---|---|---|---|---|
| 213.64/ 85 | .876 | .921 | .847 | .902 | .055 |

The present tested and validated the scale comprising only two negatively worded statements that were reverse-coded before analysis. We conducted the EFA to check the number of factors to retain and/ or delete in the given scale and also to know the loading of the items on the factors in the original SACIE-R scale. The factor inclusion and item loadings were selected based on the following standards.

a. Eigenvalue must be greater than 1 and the construct should be supported by previous literature. Also, the construct should explain as much variance as supported by previous literature (Cliff, 1988).
b. The total percentage of average variance accounted for all factors should be 40% to 50%while for a single factor, the percentage of variance accounted for should be 10% at least.

The sample was from diverse regions of Pakistan mostly covering all the provinces of Pakistan. A 100-200 sample size is enough for the scales ≤ 20 items (Clark & Watson, 1995; Haynes et al., 1999) but the current study had 500 participants surpassing the limit which is the best fit for the study. Thus, we took the SACIE-R scale (three factors) and run the EFA through SPSS version 24. After EFA, CFA was also conducted to approve the original SACIE-R for checking the factor structure via AMOS version 24. All three factors were treated in one model and variance error was permitted. The model attained through CFA revealed a good fit for the present study with $\chi^2$ *(df = 85) = 213.64, CFI = .921, and RMSEA = .055.* The cut-off point to retain the items in any of the factors was >.30. The CFA model significantly approves the factor structure generated in EFA (see Table 2). Since the model was the best fit for the current study, therefore, neither factor nor item was deleted but the original SACIE-R was retained in the full sense. The full-length SACIE-R scale is given in Table 2, those who need the scale for his/her research should take the scale as the same as given in Table 2. The CFA model is shown in Figure 1 below.

**Figure 1.** ***Factor Structure of SACIE-R through CFA***

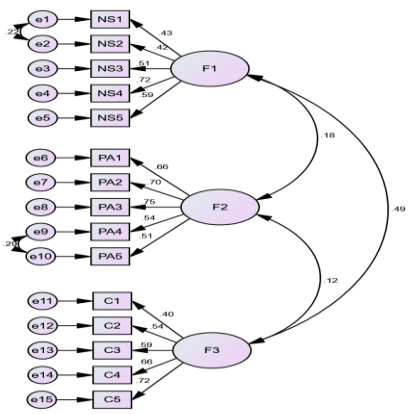


Figure 1 displays the factor structure and confirmation for the original SACIE-R. Factors 1, 2, and 3 were named as previously named in SACIE-R.

**Reliability of the SACIE-R Scale**

**Table 3**

*Cronbach Alpha of the SACIE-R Scale*

| Factors | Items | Cronbach Alpha Reliability |
|---|---|---|
| Sentiments | 05 | α = 0.70 |
| Attitudes | 05 | α = 0.78 |
| Concerns | 05 | α = 0.72 |
| Total Scale | 15 | α = 0.75 |

Items with negative statements were reverse-coded before running the analysis. The current study shows the satisfactory Cronbach alpha reliability of

the main scale and subscales (α =.70 to α =.78) which is accepted among the researchers.

## DISCUSSION

As revealed by the introduction and literature review of this study, the students' needs are diverse in nature so they require classrooms that fulfil those needs and that can only be filled by inclusive classrooms that are diverse in nature. Since the IE concept is present but how to measure those concepts, sentiments, attitudes, and concerns lacks in the Pakistani literature, therefore, a measure (scale) is needed. Our paper will give this solution by proving the tested and validated SACIE-R scale in the Pakistani context. Forlin et al. (2007) pointed out that the IE supports the three main concepts i.e., sentiments, attitudes, and concerns and our paper has highlighted all three concepts and provided a tested and validated SACIE-R scale.

The discussion focuses on the important findings relating to the validity of the SACIE-R scale using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA), and the scale's reliability using Cronbach's alpha. Further, the scale has also considerable importance because it showed the demographic characteristics of the participants. The scale had taken the viewpoints of the diverse nature of men and women who come from diverse areas of Pakistan. The scale had further shown that at least each province had participated in the current study which means that the scale has greater validity and reliability because it was applied to all provinces of Pakistan. It is proof for the researchers that they can use the scale in their respective provinces. The participants' age distribution was also important in the validity and reliability of the scale because it showed the diversity in the ages of the participants in the way that the minimum age shown by the participants was 22 years and the maximum age was 51 plus years, revealing the said scale can be considered valid and reliable for the diverse age groups. The said scale can also be considered valid and reliable for the different levels of teachers e.g., primary, secondary, and higher secondary levels because we considered all the levels of teachers except the university level. Thus, the current scale can be administered to school teachers whomsoever teach at any level in the school. A similar case is for the level of teaching experience. The scale can be administered to experienced school teachers as we have included the minimum experience of 6 months-1 year and more than 20 years. These results show that the SACIE-R scale may be used accurately at the school level when it comes to the exploration of the IE field nationally and internationally. Item s5 and c1 were reverse coded because they were negatively worded to prevent vagueness in the interpretation. The scale was arranged on 4-point Likert options as *SD=1, D=2, A=3, and SA=4*. A low mean score will show a low level of sentiments, attitudes, and concerns and vice versa. We assigned random orders to the items on the scale to ensure the respondents didn't fill it in the recurrent way (Bailey, 2004). Presently this tested and validated SACIE-R scale holds the strong authority to protect its use and application in the Pakistani context.

The CFA findings confirmed the validity of the SACIE-R scale. The model fit indices ($\chi 2$/DF, NFI, CFI, RFI, TLI, and RMSEA) revealed that the model was well-fitted in the Pakistani context. The EFA-identified factor structure was verified in the CFA, indicating that the SACIE-R items loaded consistently on their respective factors. This supports the assumption that the factor structure of the SACIE-R scale is robust and fitting to the Pakistani setting. Cronbach's alpha values were also strongly fitted in the Pakistani context, indicating a reasonable degree of internal consistency. The study findings added a better understanding of teachers' opinions of IE in Pakistan by providing a better view of the scale. The scale's findings have the potential to lead to good results in educational policies and procedures. Additionally, the validation of the scale confirms its trustworthiness, boosting its potential effect in Pakistan with regard to IE. Overall, the SACIE-R scale has the possibility to trigger its significance around the globe.

### Conclusion

Results of the current inquiry revealed that the SACIE-R is a useful, robust, valid, and reliable instrument for measuring school teachers' perceptions concerning the inclusion of students with physical disabilities within the classrooms. Further, this is the foremost study that tested and validated the SACIE-R in the Pakistani context. The full-length scale is attached in Table 2.

### Recommendations

The Department of Education and Research Institutions working in Pakistani universities should launch inclusive subjects in the curriculum to give awareness about IE in society. Thus, it is, proposed that the tested and validated SACIE-R scale might yield esteemed and valued support for teaching institutions. In particular, this scale may give a great advantage to pre-service and in-service teachers, and research students at different levels in their research journeys. The said scale aids in assessing the features of IE in different areas. Based on the findings of the study, the SACIE-R scale might be upgraded in improvement for usage in the Pakistani setting by including language translation, item clarity for easy comprehension, and adjusting items to address unique issues in the Pakistani education system. Future versions of the

scale should involve other methodologies other than those used here. Furthermore, these enhancements will strengthen the scale's accuracy by matching it with more powerful instruments for assessing convergent and discriminant validity.

**Limitations**

The total amount of average variance explained by the tested and validated SACIE-R scale is < 50% and ought to be examined further due to this limitation. The responses for validity and reliability measurement only reflect the opinions of the Pakistani samples. The sample was not randomly selected. Teachers from Punjab and Khyber Pakhtunkhwa made up the majority of the sample, perhaps leaving the least space for the teachers from other provinces. The generalizability of the findings to a larger Pakistani location may be impacted by this geographical bias. Despite being revalidated from a Pakistani perspective, the SACIE-R scale is produced in a culture other than Pakistan which might result in response bias. Furthermore, the way teachers react to statements relating to disabilities might produce hate in their minds. Therefore, care should take when generalizing the findings outside the Pakistani setting since social variances may yield, unlike results in other countries.

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