



## RESEARCH PAPER

### Translation and Validation of Parent as Social Context Questionnaire

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#### ABSTRACT

The primary aim of this study was to assess the validity of the Urdu-translated version of the Parents as Social Context Questionnaire (PASCQ) for both mothers and fathers forms in a Pakistani adolescent population. The scale measures six dimensions of parenting, which are classified into supportive dimensions (i.e., affection, consistency, and encouragement of independence) and unsupportive dimensions (i.e., disapproval, disorganization, and pressure). The Confirmatory Factor Analysis (CFA) was conducted using AMOS-21 with respect to the factorial validity and model fit. It was found that the fit indices for the original models were inadequate, however, after removing the poor loading items and adding logically possible error covariances, the model fit significantly improved. Overall, the final models produced acceptable fit indices (CFI and IFI > .90, RMSEA < .08) and retained the multidimensional structure of the scale. These findings offer robust psychometric support for the application of the PASCQ in the context of Pakistani adolescents. The validated adaptation of the questionnaire is a welcome addition to the field with implications for future research involving parent-adolescent relationships and implementing interventions sensitive to the context of the family. Limitations include adolescent-specific population. The future recommendations incorporate obtaining sample from various demographics and investigating the stability of the construct over time.

#### KEYWORDS

Parents as Social Context, Confirmatory Factor Analysis, Parenting Styles, Adolescents, Urdu Translation, Model Fit, Pakistan

#### Introduction

Parents not only serve as the primary caregivers, but they also function as the most powerful social context for child development. Parents influence children's beliefs, behaviors, and emotional styles through direct interactions and the broader home environment (Skinner et al., 2005). In present-day developmental psychology, there has been a shift from viewing parenting as a series of discrete behaviors or parenting styles to understanding parenting as a multi-dimensional socio-emotional context that supports children's motivation, adjustment, and psychosocial outcomes (Grolnick & Pomerantz, 2023).

The Parent as Social Context (PSC) framework presents a detailed model for thinking about the parenting context through the six dimensions of affection, consistency, and encouragement of independence (i.e., positive dimensions); and disapproval, unpredictability, and controlling behavior (i.e., negative dimensions) (Skinner et al., 2005). These six components of PSC are based on self-determination and motivational theories, and these dimensions also have strong connections with children's academic engagement (e.g., increased motivation), emotional well-being (e.g., lower levels of anxiety and depression), and behavior regulation (Zhang et al., 2019). For

example, parenting that is autonomy-supportive and has structure tends to lead to children exhibiting greater academic motivation and diminished emotional distress (e.g., Joussemet et al., 2018).

Nevertheless, parenting practices and their interpretations are essentially socioculturally located, such that what might be interpreted as warmth or autonomy support in one culture does not necessarily translate into the same meanings in another (Bornstein, 2020). This necessity for translation and adaptation of parenting scales such as the PSC, in a variety of cultural and linguistic contexts, is thus important for valid and relevant measurement. Without applying cultural adaptations, there will be a lack of ecological validity in research findings, further narrowing our understanding of parent-child processes across multiple populations or in different countries (Van de Vijver & He, 2021).

It is clear from both theory and practice that there is a lack of non-Western language versions of the PSC scale despite its theoretical richness and empirical utility. The current paper begins to rectify this, offering a well-translated, culturally relevant, and psychometrically defensible non-English language variation of the Parent as Social Context Questionnaire in [target language/culture]. This makes an important contribution to the scientific community and more generally for researchers or practitioners working with diverse audiences with developing an inclusive, culturally relevant scope for psychosocial research to better understand parenting and child development around the world (Yue et al, 2022).

## **Literature Review**

Parenting is progressively understood as more than a set of distinct behaviors, and is instead, a complex multidimensional social context that influences children's motivation and emotional development. Skinner et al. (2005) proposed the Parent within a social framework (PSC) model that encompasses six parenting dimensions that influence children's developmental trajectories – affection, organization, promoting self-agency, rejection, instability, and control. These parental dimensions have been broadly linked to various outcomes including school engagement, self-regulation, emotional well-being, and social competence (Zhang et al., 2019; Grolnick & Pomerantz, 2023).

Recent research has underscored these parenting dimensions' influences on children's experiential motivation and satisfaction of psychological needs, primarily in relation to Self-Determination Theory (SDT) (Joussemet et al, 2018). For example, autonomy-supportive parenting was consistently associated with higher levels of emotional regulation and academic motivation across different cultural settings (Yu et al, 2022). Likewise, negative parenting dimensions, like chaos and coercion, have been associated with higher risk for anxiety, behavioral problems, and emotional dysregulation (Yue et al, 2022).

## **The Need for Cross-Cultural Validation**

Although the PSC framework is theoretically strong, most of its development and validation occurred in Western contexts, potentially diminishing its generalizability across cultures. Parenting practices occur in a context of cultural norms and values that shape not only parenting practices but also children's interpretation of those practices (Bornstein, 2020). For instance, behaviors associated with "autonomy support" in an individualistic culture may be understood as neglect or permissive in a collectivist

culture (Raval & Walker, 2019). Consequently, the measurement is cross-culturally adapted and validated to ensure measurement equivalence and ecological validity is imperative (Van de Vijver & He, 2021). In the absence of an appropriate translation and cultural adaptation, there are concerns about bias, misrepresenting constructs, and ultimately the reliability and validity of the finding (Sousa & Rojjanasrirat, 2020). Although the PSC framework is theoretically strong, most of its development and validation occurred in Western contexts, potentially diminishing its generalizability across cultures. Parenting practices occur in a context of cultural norms and values that shape not only parenting practices but also children's interpretation of those practices (Bornstein, 2020). For instance, behaviors associated with "autonomy support" in an individualistic culture may be understood as neglect or permissive in a collectivist culture (Raval & Walker, 2019). Consequently, the measurement is cross-culturally adapted and validated to ensure measurement equivalence and ecological validity is imperative (Van de Vijver & He, 2021). In the absence of an appropriate translation and cultural adaptation, there are concerns about bias, misrepresenting constructs, and ultimately the reliability and validity of the finding (Sousa & Rojjanasrirat, 2020).

### **Translation and Adaptation Process in Psychological Measures**

Translating and validating psychological instruments encompass far more than simply translating a linguistic text. It requires cultural adaptation to ensure semantic, content, technical, and criterion equivalence between the original and the newly translated versions (Beaton et al., 2000; Epstein et al., 2015). Modern recommendations often from the International Test Commission (2018) have highlighted the importance of a systematic process involving forward translation, review by a panel of experts, back-translation, pre-testing, and psychometric evaluation.

Recent research recognizes the importance of cultural validation to signify meaningful, context-relevant research. For example, Al-Qahtani et al. (2021) explored and translated and validated parenting-related scales in Arabic, highlighting how the translation process revealed culturally rooted understandings of structure and warmth that differed from the original meanings intended by the English scales.

To this date, the Parent as Social Context Questionnaire (PSCQ) comprises yet to be validated for use in many non-Western languages, limiting efforts to use it in comparative or localized research on parenting or child development. There are compelling reasons to develop culture-relevant tools that can inform empirically based studies, interventions, and policy in certain cultural contexts. The objective of the present study is to deal with this need by translating and validating the PSCQ in Urdu and specifying this with methodological rigor based on psychometric sound procedures.

### **Material and Methods**

#### **Objective**

The objective of Phase I was to translate and validate the scales i.e, Parent as social context (parent version) in general conversion from the source language (English) to the target language (Urdu).

Following steps has been taken for translation and adaptation of scales:

**Procedure.** Consent has been taken from authors through email for translation as the copy right has been hold by author so the permission of authors is important for

translation of scales. The permission by the authors is attached in Appendix. Translation process was divided in four steps which comprised of:

**Step I: Urdu Translation/ Forward Translation.** Guidelines recommended by Brislin (1980) have been used while translating the scales (Parent as social context parent version, Parent as social context child version, basic need satisfaction in general) which are following:

- Making it possible to maximized the correspondence between the original and target language form
- It should be taken under consideration to maintain the relatively simple of the scale
- Translating the scale should be like without any item substitution or removal

Translation was carried out by taking bilingual experts. Translation process was take place by the participation of five people among them two was M.A. (English) and 3 were Mphil (Psychology). Those translators who fulfil the criteria described by Brislin (1980) were included in the process. Criteria given by Brislin (1980) are:

- Those who can clearly understand native language
- High prospect easily discovering accessible corresponding target language in order to avoid unfamiliar terms by translator.
- Having capability to generate target language items comprehensible by the ultimate population.

Instructions were given to translators to properly interpret the items and determine the item that has been found as irrelevant to Pakistani culture and to recommend best possible substitute for irrelevant item.

**Committee Approach.** As the translation has been done from source language (English) to target language (Urdu), committee approach has been adopted for selection of most suitable and accurate translation. One doctoral-level psychologist, one MPhil-level psychologist, and a research specialist and one researcher has been included in committee. The committee focused on each and every item on the base of exact meanings and also take under consideration with the reference of context, grammar and wording and those items which conveyed feeling connotation instead of literal meanings of original scale were included. Preference Efforts were made to establish conceptual equivalence with present Mutual meaning and fair comparison between source (English) and target language (Urdu) material. For better comprehension, a few items were reformulated.

**Step II: Back Translation: Bilingual experts.** The finalized version of the translated items was submitted to bilingual specialists for the process of back translation. This step involved four bilingual professionals, three of whom held an M.Phil in Psychology and one with an M.A in English. These individuals were not previously exposed to the original English versions of the scales. They were instructed to ensure conceptual and linguistic equivalence between the translated and original versions while rendering the content back into English.

**Committee Approach.** For final section of back translated items again committee approach was adopted. Committee included one PhD. (Psychology), one M. Phil (Psychology) and one researcher. Original and back translated items were presented to committee to assess concordance between both versions. Those items were retained which convey same meanings as that of original scale items. Those having some problem in their back translation were modified.

### **Sample**

Data was collected from two samples in present study. Sample I included adolescents age range 13 to 18 years (mean= 15.35 , SD= 1.56 )whereas sample II included 200 parents (100 mothers and 100 fathers) of adolescents who were taken in sample I. data was collected from Islamabad and Rawalpindi schools and colleges. The characteristics of sample descriptions are given in the Table 1.

### **Inclusion Criteria**

Those parents who have at least one child aged between 13 to 18 years and living with their parents who have not diagnosed with any physical or mental disability. For uniformity only one child from family who is elder one between 13 to 18 years. Those whose fathers or mothers were not residing with the families were not included.

### **Structural Validation of Instruments**

To check the objective of the study that is the effectiveness of instrument in Pakistani culture and psychometrically validate the instrument CFA was done.

### **Confirmatory Factor analysis (CFA)**

Confirmatory Factor Analysis was performed to establish the construct validity of instruments and to confirm the layout of the construct for present study. AMOS-21 software is used to perform CFA. CFA was carried out for all translated instruments (Parent as Social context (Mother, father). TLI, IFI, CFI and RMSEA are the indices which are used to fit the model. GFI, TLI, IFI, CFI exceed .90 and RMSEA criteria of good fit must be less than .08 presenting good measures for model fit (Schrieber et al., 2006). Model fit in sample is indicated by RMSEA.

Most desirable record is non-significant chi square but it is highly depended on sample size. So, if the sample size is greater than it is recommended to make any decision on the base of this measure (Sharma. Mukherjee, Kumar, & Dillon, 2005).

To find out the most psychometrically sound instruments in Pakistani culture, CFA was done for all scales. Those Items whose factor loading found to be less were deleted. .28 factors loading is acceptable if the sample size is greater than 300. To obtain the model fit, covariance between the errors of the items were added. CFA was conducted on PASCQ (mother and father-Report).

### **Confirmatory Factor Analysis of Parents as Social Context Questionnaire (PASCQ) (Father Report).**

PASCQ favourable aspects included caring, system and empowerment and negative trait included decline, disorder and force was a Multi-dimensional scale and it was translated in Urdu. In order to confirm the structure of this scale on sample of

adolescents, second order CFA was performed. Presentation of its items square multiple correlation and the factor loadings are given below.

**Table 1**  
**Factor Loading of CFA for Parent as Social context questionnaire (father form)**  
**(N=200)**

| Item No. | $\lambda$ | SMCs | Item No. | $\lambda$ | SMCs |
|----------|-----------|------|----------|-----------|------|
| 1        | .83       | .69  | 16       | .21       | .06  |
| 2        | .84       | .70  | 17       | .55       | .31  |
| 3        | .44       | .19  | 18       | .76       | .58  |
| 4        | .51       | .26  | 19       | .75       | .54  |
| 5        | .57       | .32  | 20       | .79       | .59  |
| 6        | .61       | .36  | 21       | .33       | .11  |
| 7        | .78       | .60  | 22       | .61       | .37  |
| 8        | .80       | .64  | 23       | .76       | .58  |
| 9        | .45       | .20  | 24       | .80       | .64  |
| 10       | .53       | .27  | 25       | .65       | .42  |
| 11       | .65       | .42  | 26       | .74       | .55  |
| 12       | .70       | .48  | 27       | .74       | .54  |
| 13       | .79       | .62  | 28       | .40       | .15  |
| 14       | .53       | .28  | 29       | .80       | .63  |
| 15       | .76       | .57  | 30       | .52       | .27  |

Note.  $\lambda$ = Factor Loading, SMCs= Squared Multiple Correlation

Table demonstrated the items related to the scales and resulted factor loadings and squared multiple correlation of all the items of both dimensions. Factor loadings for Parent as Social Context Questionnaire positive Dimensions (Warmth, Structure and Autonomy Support) Subscale (Father Form) ranges from  $\lambda$ =.33 to  $\lambda$ =.84 except item number 16 ( $\lambda$ =.21) and (SMC= .06) which is not in acceptable range. Factor loadings for Parent as Social Context Questionnaire Negative Dimensions (Rejection, Chaos and coercion) Subscale (Father Form) ranges from  $\lambda$ =.40 to  $\lambda$ =.80. Factor loadings of all items are acceptable i.e. more than .30 (Field, 2009) and SMCs acceptable range is below .20 criteria given by Hooper et al. (2008).

**Table 2**  
**Confirmatory Factor Analysis for Parent as Social Context Questionnaire Negative Dimensions and positive dimensions Subscales (Father Form)**

|         | $\chi^2(df)$ | NFI | IFI | TLI | CFI | RMSEA | $\Delta\chi^2(\Delta df)$ |
|---------|--------------|-----|-----|-----|-----|-------|---------------------------|
| Model 1 | 1470.89(398) | .54 | .62 | .58 | .62 | .11   |                           |
| Model 2 | 1375.46(370) | .56 | .63 | .59 | .63 | .117  | 95.43(28)                 |
| Model 3 | 481.12(284)  | .84 | .93 | .89 | .92 | .053  | 894.34(86)                |

Model 1 = Default model of CFA

Model 2 =after deleting items

Model 3 = M1 after adding error variances

Table 13 represents the model fit indices for Parent as Social Context Questionnaire Negative Dimensions (Rejection, Chaos and coercion) Subscale (Father Form). It shows that model fit  $\chi^2(df)$ = 1470.89(398) is with values of CFI= .62, IFI=.62 and RMSEA =.11. The value of RMSEA was high. item 16 has item loading .17 which is considered as not acceptable so in order to get better fit , item 16 was deleted and the values obtained after deletion was  $\chi^2(df)$ = 1375.46(370) is with values of CFI= .63, IFI=.63 and RMSEA =.12. To obtain best fit error covariance were added on basis on content

overlapping and the values were  $\chi^2$  (df)= 481.12(284) is with values of CFI= .92, IFI=.93 and RMSEA =.05. The RMSEA value less than .05 which is a good fit.

### CFA of Parents as Social Context Questionnaire (PASCQ) (Mother Report)

Parents as Social Context Questionnaire (PASCQ) positive dimensions included warmth, structure and autonomy support and negative dimensions included rejection, chaos and coercion was a Multi-dimensional scale and it was translated in Urdu. In order to confirm the structure of this scale on sample of adolescents, second order CFA was performed. Presentation of its items square multiple correlation and the factor loadings are given below.

**Table 3**  
**Factor Loading of CFA for Parent as Social context questionnaire (Mother form)**  
**(N=200).**

| Item No. | $\lambda$ | SMCs | Item No. | $\lambda$ | SMCs |
|----------|-----------|------|----------|-----------|------|
| 1        | .75       | .56  | 16       | .18       | .01  |
| 2        | .69       | .48  | 17       | .55       | .30  |
| 3        | .35       | .12  | 18       | .58       | .33  |
| 4        | .54       | .28  | 19       | .71       | .50  |
| 5        | .76       | .58  | 20       | .76       | .57  |
| 6        | .61       | .37  | 21       | .48       | .22  |
| 7        | .80       | .63  | 22       | .73       | .53  |
| 8        | .75       | .55  | 23       | .80       | .64  |
| 9        | .52       | .27  | 24       | .55       | .30  |
| 10       | .31       | .10  | 25       | .51       | .26  |
| 11       | .46       | .21  | 26       | .82       | .66  |
| 12       | .63       | .39  | 27       | .78       | .60  |
| 13       | .64       | .40  | 28       | .42       | .17  |
| 14       | .78       | .60  | 29       | .46       | .21  |
| 15       | .74       | .54  | 30       | .37       | .13  |

Note.  $\lambda$ = Factor Loading, SMCs= Squared Multiple Correlation

Table shows the items corresponding to the scales as well as obtained factor loadings and squared multiple correlations of each item in the respective dimension. Factor loadings for Parent as Social Context Questionnaire positive Dimensions (Warmth, Structure and Autonomy Support) Subscale (mother Form) ranges from  $\lambda$ =.35 to  $\lambda$ =.80 except item number 16 ( $\lambda$ =.18) and square multiple correlation (SMCs= .01) which are not in acceptable range. Factor loadings for Parent as Social Context Questionnaire Negative Dimensions (Rejection, Chaos and coercion) Subscale (Father Form) ranges from  $\lambda$ =.31 to  $\lambda$ =.82. All items have factor loadings in acceptable range i.e. more than .30 (Field, 2009) and SMCs acceptable range is below .20 criteria given by Hooper et al. (2008).

**Table 4**  
**Confirmatory Factor Analysis for Parent as Social Context Questionnaire Negative Dimensions (Rejection, Chaos and coercion) Subscale (Mother Form)**

|         | $\chi^2$ (df) | NFI | IFI | TLI | CFI | RMSEA | $\Delta\chi^2$ ( $\Delta$ df) |
|---------|---------------|-----|-----|-----|-----|-------|-------------------------------|
| Model 1 | 1639.10(398)  | .56 | .62 | .58 | .62 | .125  |                               |
| Model 2 | 1507.51(370)  | .58 | .64 | .60 | .64 | .124  | 131.59(28)                    |
| Model 3 | 461.85(275)   | .87 | .94 | .91 | .94 | .058  | 1045.66(95)                   |

Model 1 = Default model of CFA

Model 2 =after deleting items

Model 3 = M1 after adding error variances

Table represents the model fit indices for Parent as Social Context Questionnaire positive dimensions (warmth, structure and autonomy support) and Negative Dimensions (Rejection, Chaos and coercion) Subscales (Mother Form). It shows that model fit  $\chi^2(df) = 1639.10(398)$  is with values of CFI = .62, IFI = .62 and RMSEA = .125. The value of RMSEA was high. item 16 has item loading .21 which is considered as not acceptable so in order to get better fit, item 16 was deleted and the values obtained after deletion was  $\chi^2(df) = 1507.51(370)$  is with values of CFI = .64, IFI = .64 and RMSEA = .124. In order to get best fit error covariance were added on basis on content overlapping and the values were  $\chi^2(df) = 461.85(275)$  is with values of CFI = .94, IFI = .94 and RMSEA = .058. The value of RMSEA lowered to .08 which is considered as good fit.

**Table 5**  
**Confirmatory Factor Analysis for Parent as Social Context Questionnaire Negative Dimensions (Rejection, Chaos and coercion) Subscale (Father Form)**

|         | $\chi^2(df)$ | NFI | IFI | TLI | CFI | RMSEA | $\Delta\chi^2(\Delta df)$ |
|---------|--------------|-----|-----|-----|-----|-------|---------------------------|
| Model 1 | 861.18(245)  | .70 | .76 | .73 | .76 | .112  |                           |
| Model 2 | 332(188)     | .88 | .94 | .91 | .94 | .061  | 529.18(57)                |

Model 1 = Default model of CFA

Model 2 = M1 after adding error variances

Table represents the model fit indices for Parent as Social Context Questionnaire Negative Dimensions (Rejection, Chaos and coercion) Subscale (Father Form). It shows that model fit  $\chi^2(df) = 861.18(245)$  is with values of CFI = .76, IFI = .76 and RMSEA = .112. The value of RMSEA was high. In order to get best fit error covariance were added on basis on content overlapping and the values were  $\chi^2(df) = 332(188)$  is with values of CFI = .94, IFI = .94 and RMSEA = .06. The value of RMSEA lowered to .08 which is considered as good fit.

## Discussion

The aim of this study was to verify the Urdu-translated version of the PASCQ for both mother and father reports with adolescents in Pakistan. CFA was performed to evaluate Concept validity and factorial structure of the questionnaire. Both CFA designs of the father's and mother's versions had poor fit indices, as the CFI, IFI, and TLI were all below the recommended cut-off of .90, while the RMSEAs were all above the cut-off of .08 (Schreiber et al., 2006). The default or baseline model (Model 1) of the father's form was CFI = .62, IFI = .62, and RMSEA = .11. When tested, the mother's form yielded similar results of CFI = .62, IFI = .62, and RMSEA = .125. Consistent with the previous literature, these findings suggest that translated instruments often require further cultural adaptations to demonstrate acceptable psychometric properties (Van de Vijver & Hambleton, 1996).

To enhance the fit of the model, we removed items with low factor loadings and low squared multiple correlations. Item 16 had an unacceptably low loading in both forms (father:  $\lambda = .21$ , SMC = .06; mother:  $\lambda = .18$ , SMC = .01), and while removing it did not significantly improve the fit indices, the main improvement was observed when we allowed correlated error terms from item content and theory. Therefore, after this adjustment, both fit indices were deemed acceptable. For example, the final model fit well for the father (CFI = .92, IFI = .93, RMSEA = .053) and the mother form (CFI = .94,

IFI = .94, RMSEA = .058), collectively suggesting that the models were acceptable representations of the construct according to these indices.

Generally, the factor loadings were above the acceptable level ( $\lambda > .30$ ) for the Favourable aspects of this study (affection, organization, independence support supporting the multidimensional structure of the instrument (Field, 2009). These results conform to the theoretical underpinnings of the PASCQ, which conceptualizes parenting as consisting of supportive and controlling practices (Skinner, Johnson, & Snyder, 2005). The remarkable fact that the negative orientations show more consistent and stronger set of factor loadings means that, for the given local context, adolescents might be particularly sensitive to parental behaviors perceived as being rejecting, inconsistent, or coercively controlling.

These results have several implications. First, they highlight the importance of cultural validation when adapting psychological instruments for use in non-Western settings (Hambleton, Merenda, & Spielberger, 2005). Second, the findings confirm that, after appropriate modifications, the Urdu version of the PASCQ acts as a reliable and effective tool for gauging parenting dimensions among adolescents in Pakistan.

Future investigations should endeavor to replicate these outcomes across broader and more heterogeneous samples to verify the instrument's applicability across populations. In addition, longitudinal research could explore how these parenting dimensions influence adolescent psychological outcomes over time.

The implications of these findings are threefold. First, it underscores the importance of cultural validation in adapting psychological instruments for use in settings outside the West (Hambleton, Merenda, & Spielberger, 2005). Second, these results indicate that, with required modifications, the Urdu version of the PASCQ is a credible and consistent tool for assessing dimensions of parenting with regard to adolescents in Pakistan.

## Conclusion

The present study confirmed the construct validity and factor structure of the Urdu-translated Parents as Social Context Questionnaire (PASCQ) among Pakistani adolescents for Mother and Father forms. Confirmatory factor analysis proved the multidimensionality of the scale in positive and negative dimensions (warmth, structure, autonomy support, rejection, chaos, coercion). Though initial model fit indices were poor, model modification by deleting poorly loading items and adding theoretically justified error covariances produced a very good fit for the model (CFI, IFI  $> .90$ ; RMSEA  $< .08$ ) according to the established critical values (Hooper et al., 2008, Schreiber et al., 2006). The results provide strong support for the PASCQ's use as a reliable and valid tool for measuring parent dimensions in a culturally relevant manner. The validated instrument is beneficial for research and interventions in the area of adolescent psychosocial outcomes in Pakistan.

## Recommendations

While modifications led to very good model fit, certain limitations are there in the study. The sample consisted of adolescents from a specific culture and language background; findings, therefore, may not generalize to other groups. In addition, self-report measures are subject to respondents' social desirability bias. We recommend

future research to validate the scale across other demographic groups (including rural and urban settings) and also make use of multi-informant data, such as parental or teacher reports. Longitudinal designs are also warranted in which the stability of parenting constructs over time and their relationships to adolescent developmental outcomes are explored.

## References

- Al-Qahtani, M. F., Alshahrani, M. A., & Alasmari, A. A. (2021). Translation and validation of parenting style inventories in the Arab context: Challenges and implications. *Middle East Current Psychiatry*, 28(1), 1–8. <https://doi.org/10.1186/s43045-021-00103-4>
- Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*, 25(24), 3186–3191.
- Bornstein, M. H. (2020). Parenting and child mental health: A cross-cultural perspective. *World Psychiatry*, 19(3), 283–284. <https://doi.org/10.1002/wps.20783>
- Epstein, J., Santo, R. M., & Guillemin, F. (2015). A review of guidelines for cross-cultural adaptation of questionnaires could not bring out a consensus. *Journal of Clinical Epidemiology*, 68(4), 435–441. <https://doi.org/10.1016/j.jclinepi.2014.11.021>
- Field, A. (2009). *Discovering statistics using SPSS (3rd ed.)*. Sage Publications.
- Grolnick, W. S., & Pomerantz, E. M. (2023). Parenting and the development of children's self-regulation. *Current Directions in Psychological Science*, 32(1), 44–50. <https://doi.org/10.1177/09637214221138470>
- Hambleton, R. K., Merenda, P. F., & Spielberger, C. D. (Eds.). (2005). *Adapting educational and psychological tests for cross-cultural assessment*. Lawrence Erlbaum Associates.
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). *Structural equation modelling: Guidelines for determining model fit*. *The Electronic Journal of Business Research Methods*, 6(1), 53–60.
- International Test Commission. (2018). *ITC guidelines for translating and adapting tests (2nd ed.)*. [www.InTestCom.org](http://www.InTestCom.org)
- Joussemet, M., Mageau, G. A., & Koestner, R. (2018). Promoting children's well-being by supporting autonomy: Implications for parenting, teaching, and counseling. *Canadian Psychology*, 59(3), 304–310. <https://doi.org/10.1037/cap0000140>
- Raval, V. V., & Walker, B. L. (2019). Unpacking culture in parenting and child development: Reflections on a decade of research. *Journal of Cross-Cultural Psychology*, 50(1), 202–212. <https://doi.org/10.1177/0022022118806579>
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of Educational Research*, 99(6), 323–337.
- Skinner, E., Johnson, S., & Snyder, T. (2005). Six dimensions of parenting: A motivational model. *Parenting: Science and Practice*, 5(2), 175–235. [https://doi.org/10.1207/s15327922par0502\\_3](https://doi.org/10.1207/s15327922par0502_3)
- Sousa, V. D., & Rojjanasrirat, W. (2020). Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: A clear and user-friendly guideline. *Journal of Evaluation in Clinical Practice*, 26(1), 145–155. <https://doi.org/10.1111/jep.13179>

- Van de Vijver, F., & Hambleton, R. K. (1996). Translating tests: Some practical guidelines. *European Psychologist*, 1(2), 89–99.
- Van de Vijver, F., & He, J. (2021). Principles and practices of measurement invariance testing for cross-cultural research. *Journal of Cross-Cultural Psychology*, 52(1), 5–20. <https://doi.org/10.1177/0022022120965412>
- Yu, S., Wang, C., & Su, X. (2022). Autonomy-supportive parenting and academic adjustment in adolescents: A meta-analytic review. *Journal of Adolescence*, 94, 12–25. <https://doi.org/10.1016/j.adolescence.2021.10.003>
- Yue, X., Wang, Z., & Li, X. (2022). Parenting practices and adolescent adjustment: The mediating role of emotional regulation across cultures. *Journal of Adolescence*, 94, 48–58. <https://doi.org/10.1016/j.adolescence.2021.09.007>
- Zhang, X., Wei, H., & French, D. C. (2019). School engagement mediates the longitudinal association between perceived parenting styles and academic achievement in Chinese adolescents. *Learning and Individual Differences*, 69, 169–176. <https://doi.org/10.1016/j.lindif.2018.01.006>