Factor Analysis of the Attitude Toward Parent Involvement Survey With Preservice Teachers

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Abstract
This study involved validating the structure of the Attitude Toward Parent Involvement Survey (ATPIS). The survey was administered 1,729 times to preservice teachers along with Knowledge assessments at the beginning and end of a course on parent involvement. An exploratory factor analysis was conducted to validate the factors using more sophisticated statistical software. The analysis was conducted to validate the structure of the instrument and compare the factor structure with the factor structure obtained in a previous factor analysis. The main dimensions that the survey evaluated were parent involvement activities initiated by the teacher and parent involvement activities initiated by the parent. It replicated the original three factors and showed a strong fit. Fit statistics supported the three-factor structure in a confirmatory factor analysis. The three factors were Partners in Learning, Teacher-Initiated Activities, and Parent-Initiated Activities. Concurrent and predictive validity were assessed through correlating ATPIS scores and knowledge assessment scores at pre- and posttest. Results yielded limited evidence for concurrent validity at posttest and predictive validity. Current post-Knowledge assessment scores were correlated in four instances with current post-Attitude subscale scores (concurrent validity) and two pre-Attitude subscale scores were correlated with two post-Knowledge assessment subscale scores (predictive validity). The fact that the measure is valid and contains reliable subscales suggests its usefulness for identifying students who would involve parents once they became teachers. The 20-year-old measure needs revision to include family engagement and diversity.

Keywords
parent involvement, attitude assessment, preservice teachers, teacher training, factor analysis

Introduction
Decades of research and practice have demonstrated that collaborative family–school relationships are essential in supporting the academic achievement and social-emotional development of students (Epstein, 2018; Graham, 2011; Mapp & Kuttner, 2014; McNeal, 2015). In response to this growing body of research on parent involvement, public policies like No Child Left Behind (NCLB) Act of 2001 (2002) and the reauthorization of the Every Student Succeeds Act (EESA, 2015) require schools to include family involvement as a part of their work with students. Strategies to increase parent involvement, such as teacher home visits, directly increase student achievement (Wright et al., 2018). When Latino adolescent students perceive their parents as uninvolved due to an unwelcoming or uninviting school environment, their grade point average decreases (Alexander et al., 2017). The relationship-building skills of teachers (Parks, 2018), responsiveness to cultural differences (Soutullo et al., 2016), accommodation of families’ unique circumstances when planning events and activities (Soutullo et al., 2016), and informing parents on issues related to school performance (Anastasiou & Papagianni, 2020) are key competencies teachers must possess to successfully engage parents in the education process. Parent–teacher communication is a particularly important strategy for ensuring successful parent involvement. D’Haem and Griswold (2017) found that parent–teacher communication was mentioned as the most important parent of parent involvement when interviewing student teachers. Leenders et al. (2019) stated that foundational to effective two-way communication is informal contact and teacher outreach. When working with more specialized populations, such as migrant farmworkers, such techniques as home visits on evenings and weekends and going into the fields were found to be
effective ways of fostering parent–teacher communication (J. Smith, 2020). Family volunteering and attendance at school events are also important parts of parent involvement. Preservice teachers viewed interactive homework and assistance with field trips as key aspects of parent involvement (D’Haem & Griswold, 2017). In addition, T. L. Baker et al. (2016) found that offering child care for siblings, weekend activities, and food as part of weeknight events could increase participation in school events. With this emphasis on the critical role of family involvement in student’s learning, learning to develop partnerships with families is now an expected part of a teacher’s professional responsibilities.

The Parent Teacher Education Connection (PTEC) curriculum was developed as part of the efforts to prepare preservice teachers for family engagement. PTEC is a web-based curriculum focused on instructing preservice teachers about best practices in family involvement (Nathans et al., 2020). To evaluate the efficacy of the PTEC curriculum, the Attitude for Parent Involvement Survey (ATPIS; Epstein et al., 1993) was administered pre- and postcurriculum implementation. The purpose of this study was to examine the factor structure of the Attitude Toward Parent Involvement Survey—specifically when used with preservice teachers to determine its usefulness with teachers, both preservice and in-service.

Parent Involvement Training in Teacher Preparation Programs

Teacher preparation programs around the world have acknowledged the need to incorporate more course activities whose focus is to better prepare preservice teachers for family engagement (Alanko, 2018; Gomila et al., 2018; Mutton et al., 2018; Saltmarsh et al., 2015). In fact, family involvement is a requirement of the Council for the Accreditation of Educator Preparation (2014) teacher preparation standards.

Despite the importance of family involvement in education, teacher preparation programs still often fail to adequately prepare preservice teachers to work effectively with families (Anastasiou & Papagianni, 2020; D’Haem & Griswold, 2017; Evans, 2013; Walker, 2019). This lack of preparation is evident by the fact that one of the most frequently expressed barriers to family involvement in schools is the lack of training provided in family involvement in education (Bartels & Eskow, 2010; Baumgartner & Buchanan, 2010; Zygmunt-Fillwalk, 2011). Training programs reported inability to meet set standards by regulatory bodies to provide preservice teachers with the training needed for them to effectively engage parents (Gomila et al., 2018). According to the results of a survey conducted by MetLife Survey of the American Teacher (2012) that was conducted in the United States, teachers rated their colleagues, principals, and professional development more helpful than their teacher preparation program in equipping them to engage parents, with 30% evaluating their teacher preparation program as fair or poor.

In another study of early career teachers (those in the field less than 5 years), teachers described frustrations and inadequate knowledge of family and school partnerships and expressed a desire for greater preservice preparation to work with families (Miller et al., 2014). D’Haem and Griswold (2017) reported that preservice teachers experienced stress and fear regarding working with parents, desiring more preparation for parent involvement.

In 2005, Epstein found that in general, teacher education program leaders viewed coverage of this topic as insufficient. In response to a national survey, Epstein and Sanders (2006) reported that deans of schools and colleges of education recognized the importance of preparing teachers to support family, school, and community partnerships—especially in Title 1 schools. More than half of the deans indicated their programs, particularly those with special and early childhood (EC) education, attended to some topics in parent involvement. Kyzar et al. (2019) found that there was generally a low level of coverage of parent involvement–related topics in special education teacher education preparation programs. Curricula were often ill-defined (Gomila et al., 2018), or the topic of parent involvement was given inadequate space in preservice programs due to time constraints (Mutton et al., 2018). Typically, there was not a full course on parent involvement, and preservice teachers were given piecemeal training through limited topics integrated throughout several courses in their teacher education programs (Mutton et al., 2018; Tajani, 2020). Gomila et al. (2018) found that the competencies and attitudes required of students concerning parent involvement were unclear in their teacher education programs. Epstein and Sanders (2006) reported that only 7.2% reported that their preservice teachers were effectively prepared to build partnerships with families and communities. The deans viewed as barriers the attitudes of teacher education faculty, the crowded teacher education curriculum, control of the curriculum by the state, and the slowness of change in higher education. The slowness of change in higher education referred to the lack of incorporation of parent involvement curriculum in higher education preservice programs despite its demonstrated need in preparing preservice teachers for parent involvement.

Preservice Teacher Beliefs and Attitudes Toward Family Involvement

Despite this lack of preparation, preservice teachers generally possess positive attitudes toward involving families in a student’s education (D’Haem & Griswold, 2017; Uludag, 2008). Teacher attitude toward family involvement has been defined as the teacher’s views regarding the effectiveness of parents’ educational support of their children (I. Jones et al., 1997). Meehan and Meehan (2018) noted that preservice teachers value the potential of having positive relationships with parents. Teachers with more positive attitudes toward
family involvement value supportive family engagement practices such as family conferences, communicating with families, and providing families with both good and bad reports about students’ progress (Goodall, 2018). More positive opinions about family engagement are also more likely to successfully involve families who are traditionally less engaged in their student’s education (Goodall & Montgomery, 2014).

Research has demonstrated that preservice teachers’ attitudes and behaviors regarding family involvement can be impacted through implicit training and hands-on learning experiences (Brown et al., 2014; Nathans et al., 2020). Students recognize the role of parent involvement in student success (D’Haem & Griswold, 2017). Preservice teachers see the benefits of parent involvement: (a) the sharing of information that improves student academic achievement, (b) changing negative parent attitudes toward education, and (c) improving the image of teachers as competent and supportive professionals (D’Haem & Griswold, 2017). Several methods are used to educate preservice teachers. Role-play and lecture are typical methods of training preservice teachers in parent involvement content (D’Haem & Griswold, 2017). Engagement in virtual classroom simulations also helps to prepare students to use goal-oriented strategies for developing family–school partnerships (Prieto, 2018). Preservice teachers were able to draw upon families’ funds of knowledge to build relationships with parents during simulated parent–teacher conferences to foster culturally responsive teaching (Khasnabis et al., 2018). An example of a hands-on learning experience is one in which Hooks et al. (2019) engaged preservice teacher interns in family interviews about a specific child in addition to a family learning project in which interns worked with an already planned event, planned an event within a grade or classroom, or planned a take-home project and then had to do a reflection on the project. Accardo et al. (2020) described a family learning project used with special education preservice teachers in which the teachers had to contact a family, build a relationship with a parent, and learn about the child’s experiences at home, family’s expectations for the child at school, and the parents’ support skills.

Preservice teachers who completed parent involvement coursework in the forms of (a) parent involvement courses, (b) observations, (c) interactions with parents, (d) attendance at parent meetings, and/or (e) attendance at sessions on the topic felt better prepared and more confident in their skills to use parent involvement strategies in their classrooms (Epstein, 2018; Evans, 2013; Ferrara, 2017; Ramirez et al., 2016; T. E. Smith & Sheridan, 2019; Uludag, 2008). In Finland and Switzerland, where parent involvement content is covered in both stand-alone courses and integrated into other course content, program directors (Finland) and teacher educators (Switzerland) believed that their preservice teachers were competent to work with families (Alanko, 2018; Lehmann, 2018). Student teachers given opportunities to work with families during placements in preservice programs showed high self-efficacy for partnering with families (J. C. Jones et al., 2020). In addition, preservice teachers who listened to parent panels of students with disabilities changed their attitudes regarding parent involvement of parents with disabilities (Koch, 2020). After parent involvement coursework, preservice teachers could also recognize teachers’ stereotyping, negative, or overly blaming attitudes toward parents as causing difficulties in students’ classroom behavior and academic achievement (Hindin & Mueller, 2016). Because attitudes and values are often significant predictors of future behavior (Ajzen & Fishbein, 1973; Crano & Prislin, 2008; Kraus, 1995; Sheeran, 2002; Wicker, 1969), it is important for teacher education programs to aim for this type of change.

The relationship between teacher’s beliefs and attitudes toward family involvement and their behavioral intention to form partnerships with families may be explained by the theory of reasoned action (Ajzen & Fishbein, 1973). The theory of reasoned action describes the relationship between a person’s behavioral intention and a person’s attitude about the behavior as well as the persons’ view of what others think of the behavior (Ajzen & Fishbein, 1973). The theory of reasoned action predicts how individuals will behave based on their preexisting attitudes and behavioral intentions (Ajzen & Fishbein, 1973). Accordingly, it can be assumed that a teacher who has a positive attitude toward involving family in children’s education will behave to facilitate family involvement. Pryor and Pryor (2009) applied the theory of reasoned action to a study of 40 kindergarten through high school teachers and found that attitude was the strongest predictor of intention to perform behaviors related to family involvement. Teachers’ opinions, beliefs, and prior experiences with family involvement make up their values and attitude toward family involvement (Kurtines-Becker, 2008; Patte, 2011). These opinions, beliefs, and prior experiences form how a teacher views parent involvement.

Therefore, it is crucial for teacher preparation programs to be able to obtain reliable and valid information about the attitudes toward family involvement of preservice teachers. Accurate information about these attitudes would allow teacher preparation programs to identify areas for further development on family involvement. Information about preservice teachers’ attitudes toward family involvement would also allow teacher preparation programs to better address the topic in coursework. It will also relate to potential improvements in parent involvement skills, such as communication with parents and engagement of difficult parents.

Method

Research Method

The study’s purpose was to validate through exploratory factor analysis (EFA) the already-determined factor
structure of the ATPIS using more sophisticated statistical methods, such as maximum likelihood factor analysis. The EFA was conducted using Maximum Likelihood factoring, as recommended by Costello and Osborne (2005) as the best factoring technique. Several authors (Abdi, 2003; Kieffer, 1998; Osborne, 2015) recommended always using an oblique rotation; therefore, direct oblimin was used. Also, the article aimed to find supportive evidence for the factor structure of the ATPIS through confirmatory factor analysis (CFA), which was used to validate the structure found in the EFA. This study was the first exploration of CFA with this instrument. The goal of the study was to provide the reliability of the factor structure to promote the use of the measure. The concurrent and predictive validity of the measure was determined with correlations between the pretest and posttest Knowledge assessments and ATPIS subscales.

As part of the PTEC curriculum evaluation, the ATPIS was administered 1,729 times from 2004 to 2008. This included both the pre- and postadministration of the survey. The participants in the PTEC curriculum study where the Attitude Toward Parent Involvement Survey was administered were enrolled in 23 courses in one of four demographically diverse universities in the Southwest, South, South Rural, and Northwest United States. Completion of the survey took place in different courses of various programs that included EC, elementary, bilingual, English as a Second Language (ESL), middle school, and special education at the various universities. Ethnicities of preservice teachers participating at all study sites were 6.3% African American, 0.3% Asian, 28.8% Latino, 62.3% White, and 2.1% other; preservice teachers were 15.1% male and 84.9% female. Most preservice teachers (60.7%) prepared to teach Grades EC to 4; 20.7% intended to teach Grades 4 to 8 (middle school); 12.3% intended to teach Grades 8 to 12 (high school); and 6% planned to teach art, music, or physical education at all levels, EC to 12. Most preservice teachers were working toward initial baccalaureate teacher certification, but 7.5% were preservice teachers conducting postbaccalaureate work. All of the participant scores from both the pre- and postadministration of the Attitude Toward Parent Involvement Survey were included in the factor analysis.

Instrument

The ATPIS was designed by Epstein et al. (1993) to use to assess in-service teachers’ attitudes and beliefs surrounding the relationships that exist between school-based parent involvement programs of the schools and the actual practices that the teachers used to foster parent involvement in their classrooms (Epstein et al., 1993). To provide methodological context for the study, Hindin and Mueller (2016) discussed previous ways in the preservice teacher literature that attitudes/dispositions toward parent involvement have been measured, including (a) ranking statements by degrees of importance, (b) using a Likert-type-scale questionnaire to measure candidates’ beliefs about families (what is used in this study), (c) self-ratings by students, and (d) rating preservice teachers’ expectations for parent involvement depending on parents’ demographic characteristics. The survey is grounded in Epstein’s Framework for Parental Involvement, which recognizes six different types of involvement: (a) parent practices that establish a positive learning environment at home, (b) parent–school communications about school programs and student progress, (c) parent participation and volunteering at school, (d) parent and school communications regarding learning activities at home, (e) parent involvement in school decision-making and governance, and (f) parent access to community resources that increase students’ learning opportunities (Epstein, 2011). According to Epstein (2011), parents’ involvement in children’s education is not static. Rather, differences in any one of three overlapping spheres of influence—family, community, or school—can influence the types of involvement that parents engage in. To provide further context for this study, it is important to assess teacher attitudes, as they predict actual teacher practices and views of behaviors. For example, Kurucz et al. (2020) found that a measure of inclusive self-efficacy, which reflected valuing capabilities of all children and parents, predicted more positive ratings of family engagement in preschool for parents of immigrant and non-immigrant children. They also predict how involved parents become in school. McDowall et al. (2017) found that teachers’ beliefs about the helpfulness of parent involvement positively predicted parents’ school-based involvement. Using Epstein’s Framework for Parental Involvement as a foundation, this survey included questions aimed to understand teachers’ attitudes regarding their role in supporting parent involvement and their attitudes regarding the parent’s role in facilitating parent involvement.

Although this instrument was originally designed for use with in-service teachers, the designers of the PTEC study felt it adequately captured the broader construct of the PTEC study: preservice teachers’ capacities to engage with families. This self-report survey asks teachers to rate the importance of several dimensions of parent involvement practices. It uses a 4-point Likert-type scale, with 1 being not important and 4 being very important. The survey questions are split into two sections. The first section is focused on the teacher’s role in supporting parent involvement activities. It contains 15 items and asks preservice teachers to rate how important specific parent involvement activities are that teachers engage in with students. Preservice teachers are asked to respond to a prompt stating, “Teachers choose among many activities to assist their students,” after which 15 examples of such activities are listed (i.e., “Have at least one conference with a parent of each of my students”) and participants rate the importance of each using the Likert-type scale described above. The second section focuses on the role of the parent in facilitating parent involvement activities. It is also made up of 15 items but asks preservice
teachers to respond to a second prompt stating, “This question asks for your professional opinions about activities that you think should be conducted by the parents of the students you teach,” after which 15 examples of these activities are listed (i.e., “Join a parent organization or school committee”). Participants’ responses are rated on the same Likert-type scale as the first 15 questions.

Previously, Brown et al. (2014) determined that the ATPIS was made up of three factors. The first factor, “Partners in Learning,” contained items addressing mutually shared responsibilities between teachers and parents for parent involvement activities, including parent–teacher conferences. The second factor, “Teacher-Initiated Activities,” contained items involving teachers playing the main role in facilitating parent involvement activities, such as joining policy committees that parents serve on. The third factor, “Parent-Initiated Activities,” contained items measuring activities that parents make choices to be involved with, such as volunteering.

**Data Collection**

Data were collected during the field testing of the PTEC curriculum. This curriculum was developed by a team of educators at four demographically diverse universities across the United States as a resource for training preservice teachers on family engagement. PTEC includes six online modules, based on the six types of parent engagement identified by Epstein (2001): supporting parenting skills, communicating with families, learning at home, volunteering in the school, advocacy and decision-making, and collaborating with the community. Before and after the completion of each PTEC module, each site administered a knowledge assessment based on the content of the module being implemented. Each knowledge assessment was developed by staff who worked on the PTEC project. Assessments consisted of 15 multiple-choice and five true/false items based on information contained in the modules and their purposes. Knowledge assessments were scored as correct or incorrect (dichotomous data), and an overall percentile score was calculated. The time between pre- and postassessment was typically one week. In addition, each participant took the ATPIS during the first week of each semester and at the end after completing the PTEC modules.

**Results**

Results showed a good fit both mathematically and conceptually for a three-factor solution with nearly identical loadings to the original factor analysis published in Brown et al. (2014; see Table 1); thus, the original three-factor names were retained. The first factor, Partners in Learning, contained items focused on jointly collaborative activities between the parent and the teacher, including such items as “Parent–teacher conference” and “Know what child is expected to learn.” The second factor, Teacher-Initiated Activities, consisted of items reflecting parent involvement activities that the teacher approached the parents to initiate, such as “School policy committees with parents” and “Requesting information from parents about child’s skills.” The third factor, Parent-initiated activities, included items that had content addressing parent involvement activities started by the parent, such as “Volunteer at school” or “Join parent organization/committee.” The scree plot suggested a one-factor solution; however, the three-factor solution was more interpretable and has been previously supported (see Table 2). In addition, the one-factor model showed poor EFA fit statistics. Because the root mean square error of approximation (RMSEA) and comparative fit index (CFI) values did not meet recommended cutoffs, a one-factor solution was not supported as fitting these data. Thus, the three-factor solution was chosen over the one-factor solution (see Table 1). Although the original factors were retained, two items were moved to other factors than they had been placed within the original factor analysis. The item, “Involve parents as volunteers,” was moved from “Partners in Learning” to “Teacher-Initiated Activities.” The item, “Attend assemblies and other special events at the school,” was moved from “Parent-initiated Activities” to “Partners in Learning.” The item, “Include students in conferences with parents,” was dropped because it did not show a loading over .3 on any factor.

A confirmatory factor analysis was conducted on the same sample to confirm the factor structure. First, a one-factor model was tested based on the findings from the scree plot. Although some measures of model fit did meet cutoff requirements, the CFI did not meet the cutoff (see Table 2). Therefore, this model was rejected.

A three-factor model was tested to confirm the factor structure from the EFA. The three factors were allowed to correlate. This solution fit the model well (see Table 2). All standardized factor loadings were of large magnitude, ranging from .607 to .861, which demonstrated that they contributed substantially to the latent factors (see Figure 1 for loadings). All factor loadings were statistically significant ($p < .001$), which showed significant relationships between items and latent factors. The $R^2$ values ranged from .405 to .741, which demonstrated that the variables explained a substantial proportion of the variance in the latent factors. Three sets of errors were allowed to correlate between items $q1d$ and $q1e$, $q1g$ and $q1h$, and $q1i$ and $q1j$ based on modification indices suggested after the model was initially fit. These correlations were theoretically sound based on the fact that they were between items on the same scale that measured similar concepts.

All three subscales showed strong reliability coefficients. For “Partners in Learning,” Cronbach’s alpha was .95. For “Teacher-initiated Activities,” Cronbach’s alpha was .91. For “Parent-initiated Activities,” Cronbach’s alpha was .87. Concurrent validity at pretest was tested by correlating the three attitude factors at pretest with the six knowledge scores at pretest. No statistically significant correlations emerged. This analysis was repeated for posttest scores.
Table 1. Factor Loadings for the Attitude Toward Parent Involvement Instrument.

| Item | Item description | Factor 1: Partners in learning | Factor 2: Teacher-initiated activities | Factor 3: Parent-initiated activities |
|------|------------------|--------------------------------|----------------------------------------|--------------------------------------|
| Q1a  | Parent–teacher conference | .58                            | .13                                    | −.01                                 |
| Q1b  | Include students in conferences | .12                            | .26                                    | .16                                  |
| Q1c  | Attendance at evening events | .16                            | .34                                    | .18                                  |
| Q1d  | Contact parents with problems | .74                            | .10                                    | −.12                                 |
| Q1e  | Inform parents of child progress | .57                            | .28                                    | −.07                                 |
| Q1f  | Involve parents as volunteers | .27                            | .34                                    | .19                                  |
| Q1g  | Inform parents of required skills | .56                            | .25                                    | −.08                                 |
| Q1h  | Inform parents of grading procedures | .58                            | .27                                    | −.13                                 |
| Q1i  | Teach parents how to discuss learning with child | .11                            | .73                                    | −.02                                 |
| Q1j  | Specific activities for parents to raise grades | .16                            | .69                                    | −.07                                 |
| Q1k  | Homework involving family at home | .01                            | .56                                    | .11                                  |
| Q1l  | Collaborating with other teachers | .10                            | .59                                    | .11                                  |
| Q1m  | School policy committees with parents | −.15                           | .65                                    | .31                                  |
| Q1n  | Request info from parents about child skills | .15                            | .47                                    | .11                                  |
| Q1o  | Work with community to improve student programs | .05                            | .48                                    | .23                                  |
| Q2a  | Set quiet place for home studying | .75                            | −.02                                   | .08                                  |
| Q2b  | Know what child expected to learn | .75                            | .06                                    | −.01                                 |
| Q2c  | Regularly check homework | .87                            | −.05                                   | −.01                                 |
| Q2d  | Talk at home about class with student | .75                            | .05                                    | .05                                  |
| Q2e  | Encourage class participation | .62                            | .08                                    | .15                                  |
| Q2f  | Ask teachers about how to discuss homework | .31                            | .33                                    | .21                                  |
| Q2g  | Talk to teachers about home problems | .38                            | .22                                    | .11                                  |
| Q2h  | Attend assemblies and other school events | .44                            | −.01                                   | .37                                  |
| Q2i  | Talk to child about importance of school | .85                            | −.08                                   | .04                                  |
| Q2j  | Monitor progress in each subject | .79                            | .01                                    | .04                                  |
| Q2k  | Help child balance homework with other activities | .77                            | −.06                                   | .07                                  |
| Q2l  | Volunteer at school | .11                            | .09                                    | .70                                  |
| Q2m  | Join parent organization/committee | .02                            | .06                                    | .83                                  |
| Q2n  | Encourage child participation in community | .18                            | .12                                    | .59                                  |
| Q2o  | Help child plan for future | .58                            | −.00                                   | .26                                  |

Four correlations were statistically significant. Post-Parenting was correlated with Partners in Learning, $r = .25, p = .014$. Post-Communicating was correlated with Partners in Learning, $r = .26, p = .016$. Post-Volunteering was correlated with Teacher-Initiated Activities, $r = .24, p = .029$. Post-Learning at Home was correlated with Teacher-Initiated Activities, $r = .27, p = .038$. Predictive validity analyses were computed to determine whether the three preattitude factors predicted the six postknowledge factors. Two correlations were significant (see Table 1). Partners in Learning was correlated with Post-Parenting, $r = .25, p = .014$. Partners in Learning was correlated with Post-Communicating, $r = .26, p = .016$.

Discussion

Teacher preparation programs have a pressing need for a quick and reliable assessment that can identify individual preservice teacher’s positive and negative attitudes about parent involvement. The main purpose of this study was to validate the factor structure of the ATPIS with preservice teachers to evaluate its usefulness as a measure of teacher preparation in parent involvement. Study results demonstrated that the ATPIS captured preservice teachers’ attitudes regarding three categories of parent involvement that are important for all preservice teachers to become effective in their positions. Therefore, its usefulness as a measure of teacher preparation in parent involvement was confirmed. Previous literature discussing family projects in parent involvement (Accardo et al., 2020; Hooks et al., 2019) or simulations of conferences (Khasnabis et al., 2018) or virtual classrooms (Prieto, 2018) could benefit from knowledge of research regarding the ATPIS, as the ATPIS could be incorporated as a method of assessing pre–postattitude change regarding parent involvement when using parent involvement interventions.
The results from the EFA and CFA supported a three-factor, 29-item scale consisting of Partners in Learning, Teacher-Initiated Activities, and Parent-Initiated Activities that closely matched a previously conducted EFA on this instrument (Brown et al., 2014). One item was dropped because it did not load on any of the three factors. Two items were moved from the original EFA due to loadings that suggested a better fit with other scales than those found in the original factor analysis. The CFA findings confirmed the EFA findings with strong fit statistics. These findings provided important results because they supported the three-factor structure by providing fit statistics with more advanced statistical techniques than that used in Brown et al. (2014). Results demonstrated that the ATPIS measures three facets of preservice teachers’ attitudes toward parent involvement: Partners in Learning, Teacher-Initiated Activities, and Parent-Initiated Activities. The subscales had good internal consistency reliability, showing that the items on each scale grouped together well to form cohesive subscales.

Results showed that the measure’s initial dichotomy when it was developed of teacher- versus parent-initiated activities did not fully capture what the scale actually assessed. Sixteen items loaded on the “Partners in Learning” subscale tapped activities with mutual influence between teachers and parents. The facets effectively captured the dynamics of parent involvement, in which both parents and teachers introduce activities, and some activities involve joint cooperation. It is important that preservice teachers understand that parent involvement activities are reliant upon a partnership between teachers and parents (Epstein, 2018). Responses to the “Partners in Learning” scale reflect such an understanding.

The validity findings provided moderate support for the measure’s concurrent and predictive validity. It is important to note that there were 18 correlations computed for each validity assessment, and there were four statistically significant correlations for concurrent validity and two statistically significant correlations for predictive validity. At a $p$ value of .05, one statistically significant correlation would be expected by chance. Accordingly, our results did not provide strong evidence of validity. They did suggest that there is a moderate relationship between attitudes toward parent involvement and knowledge regarding parent involvement at posttest. In addition, for Partners in Learning, preservice teachers’ attitudes toward parent involvement predicted their knowledge of involvement after receiving instruction. These findings supported the measure’s usefulness as a tool that can reflect knowledge regarding parent involvement. Therefore, using the measure as a way to assess attitudes regarding parent involvement may suggest how knowledgeable the teacher is regarding parent involvement.

This study is the first study to confirm the instrument’s factor structure. Therefore, it provides support for the measure’s widespread usage with preservice teachers to assess attitudes and attitude change after training in parent involvement. According to the theory of reasoned action (Ajzen & Fishbein, 1973), if a preservice teacher has a positive attitude toward involving family in children’s education, they will behave in ways to facilitate family involvement once they become teachers in their own classroom. This theory has applicability to the results of the study because they suggest that this measure, as a measure of attitude change, can be used to evaluate whether preservice teachers will behave to foster parent involvement as teachers. The theory supports the results of recent research. As McDowall et al. (2017) demonstrated, teacher attitudes toward parent involvement can impact the actual level of parent involvement in schools. Thus, it is important to have a metric of their attitudes and attitude change. This measure could serve as a benchmark in preservice education programs for assessing progress in learning about the importance of parent involvement. For example, Nathans et al. (2020) reported results of attitude change on the three factors from pre- to posttest over a semester course on parent involvement. If given repeatedly throughout preservice programs, teacher educators could assess teacher candidates’ readiness to engage with parents once entering student teaching and in-service teaching positions. Curricula could be altered within preservice teaching programs, which, as stated earlier, is a much-needed reform, to accommodate preservice teachers’ current grasp of the importance of parent involvement and “how far they have to go” in terms of understanding the various facets of engaging parents during their teaching careers. As the measure taps into all six types of parent involvement, it could be used to assess areas of strength and weakness in teacher profiles of understanding what areas they need to engage with parents in (decision-making, in the home, parent–teacher communication) to help build up their knowledge of all types of parent involvement and make sure all six types are adequately
Figure 1. CFA of ATPIS.
Note. CFA = confirmatory factor analysis; ATPIS = Attitude Toward Parent Involvement Survey.
covered for all teachers within teacher preparation programs. The measure could also be used for in-service teachers to determine whether they need professional development in the area of parent involvement, such as attending workshops to inform them on the six types of parent involvement and show administrators how their teachers need to improve their attitudes and implement parent involvement in their classrooms.

Limitations

A strength of the study was that it utilized a large sample of preservice teachers; however, the majority of the sample consisted of White females. Due to these limits to the study’s generalizability, the study should be replicated with more ethnically diverse subjects and samples involving a higher percentage of males. The sample was limited geographically to four locations, as well. The measure should be tested on a wide array of diverse samples before it can be claimed to be broadly applicable to all teachers due to the limits of generalizability. Another limitation of the study was that the sample of preservice teachers was not randomly selected. Participants were all enrolled in courses at one of the four universities involved in the Parent Teacher Education Connection project. This project was a collaboration between four geographically diverse universities to develop and study an online curriculum dedicated to preparing preservice teachers to work with parents. For this reason, the sample was a convenience sample of preservice teachers at just four universities, which may have affected the results by not being representative of all types of teacher preparation programs across the country.

Implications

The use of the measure provides teacher educators with a way to determine preservice teachers’ readiness to enter the classroom and work effectively with parents. This measure can be administered again as preservice teachers progress through their programs to determine the adequacy of learning about this topic at different points in their training. Stronger predictive validity evidence should be obtained for this measure to determine whether preservice teachers who score highly on this measure will implement parent involvement strategies more in their classrooms once they become in-service teachers. It may also be useful for research purposes to compare the effectiveness of different programs in preparing preservice teachers to involve parents and to compare the effectiveness of different levels of parent involvement training (i.e., a full course on parent involvement vs. specific lectures). The measure could also be used to show which preservice teachers are potentially more skilled in engaging parents and which preservice teachers may need more instruction and/or training.

The measure could be improved by increasing the specificity of questions to match knowledge learned in parent involvement coursework. For example, instead of using the question, “Volunteer at school,” the measure could state, “Volunteer at school for events such as bake sales and classroom parties.” This measure is over 20 years old and the field has been moving toward a more holistic conceptualization of family engagement rather than simply “parent” involvement. The measure could be improved by updating the “Parent responsibilities” section to a “Family responsibilities” section. This section could include such questions as “Share my family’s culture with teachers” and “Include all family members in following my child’s progress at school.” The knowledge that a measure can be developed to measure attitudes toward parent involvement can benefit the field of teacher education if such changes are addressed.

Authors’ Note

The study was approved by the University of North Texas Institutional Review Board and no ethics violations were committed during its execution.

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