Summary
Validity and Reliability Study of the Turkish Version of the Father Involvement in Health

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The involvement of fathers in the family has been found to have direct or indirect effects on children, particularly with regard to their economic, physical, and psychological well-being (Day & Lamb, 2004). As preschool children's environmental surroundings expand from the home to include daycare and school, their more complex social needs, such as attachment and exploration, emerge (Cath, Gurwitt & Ross, 2013; Yogman, 1994). A variety of studies have demonstrated that father involvement in preschool is associated with a range of psychosocial and biobehavioural outcomes, including cognitive, emotional and social development (Downer & Mendez, 2005; Pancsofar & Vernon-Feagans, 2006; Cook, Roggman, Boyce, 2011; Pougnet, Serbin, Stack & Schwartzman, 2011; Brown, Mangelsdorf &Neff, 2012; Lamb & Lewis, 2013). The association between father involvement and the physical health of the child, as well as the acquisition of healthier living habits, has highlighted the necessity for a multidimensional, holistic evaluation of father involvement that encompasses the health dimension (Stewart & Menning, 2009; Garfield et al., 2019).

A review of the literature at the national and international levels reveals the existence of a measurement tool for evaluating father involvement during the preschool period (Sımsıkı & Şendil, 2014). Nevertheless, no measurement tool specifically related to father involvement in health during the preschool period has been identified, with the exception of the Father Involvement in Health–Preschool (FIH-PS) instrument (Garfield et al., 2019), which has been evaluated for its construct validity and internal consistency.

The aim of this study is to conduct a validity and reliability assessment of the Turkish adaptation of the Father Involvement in Health–Preschool (FIH-PS). This assessment will focus on evaluating father involvement in health-related contexts, emphasising the importance of developing multidimensional measures of such involvement.

Method

Participants

The study's sample consisted of 143 fathers with children aged 3-6 years. The Father Involvement in Health–Preschool was adapted into Turkish, and validity and reliability studies were conducted.

Measures

A Socio-Demographic Information Form was provided to each participant, in addition to the scales listed below. To evaluate the validity of the measurement tool, the Father Involvement Scale was administered. Information regarding the data collection instruments is presented below.

Father Involvement in Health–Preschool (FIH-PS) Scale:

The scale was developed by Garfield et al. (2019) for the purpose of measuring father involvement in health-related contexts. The scale emphasises the necessity for multidimensional measures of father involvement and is comprised of four sub-dimensions: The four sub-dimensions are general well-being, acute illness, emotional health, and role modelling. The original scale comprises 20 items, which are evaluated using a Likert-type rating system (1 = Never, 3 = Sometimes, 5 = Always).

Father Involvement Scale (FIS)

The 37-item scale, developed by Sımsıkı and Şendil (2014), is used to assess the level of involvement of fathers with children aged between three and six years. The scale is comprised of three sub-dimensions. The three sub-dimensions are: Arbitrary Occupation, Attention and Closeness and Primary Care. The items are scored on a five-point Likert scale. In the study by Sımsıkı and Şendil (2014), the internal consistency coefficient for the entire scale was calculated as Cronbach's alpha of .92. The test-retest reliability coefficient of FIS was found to be .98 in the same study. In the study, the internal consistency coefficient for the entire scale was calculated as .96 using Cronbach's alpha.

Procedure

The Turkish translation and back-translation of the original FIH-PS have been successfully completed. Subsequently, each item was subjected to an evaluation by a panel of five referees (comprising two professors, two associate professors, and one assistant professor) to assess its alignment with the original scale and clarity of expression. The translated version was administered to a sample of 10 participants who were not part of the main research group.

During the interviews, it was observed that the participants readily comprehended the items and provided responses that were pertinent and consistent.

Subsequently, the items in the Turkish form were revised and refined in accordance with all suggestions. An online questionnaire was prepared, incorporating a socio-demographic information form and the relevant scales. Participants were selected using a convenience sampling method, and data were collected via the online platform (GoogleForms). For the test-retest phase, 14 participants were contacted again after a month and were asked to complete the FIH-PS once more.

Results

In the adaptation phase of the FIH-PS exploratory factor analysis was used to test whether the factor structure of the original scale was appropriate for the Turkish sample. Following the factor analysis, Cronbach's alpha internal consistency, test-retest reliability, and split-half reliability coefficients were examined to assess the reliability of the scale. Finally, to test the criterion-related validity of the scale, the relationship between the FIH-PS and the Father Involvement Scale was analyzed

Results of Construct Validity

In order to test the construct validity of FIH-PS an exploratory factor analysis (EFA) was conducted. Furthermore, the Father Involvement Scale (FIS) was employed to evaluate the validity of the measurement instrument.

An exploratory factor analysis (EFA) was conducted using PAF with Promax rotation in order to examine the factor structure of the FIH-PS. The factor analysis revealed four factors with eigenvalues greater than 1, which collectively explained 65% of the total variance (40.76%, 10.18%, 8.01%, and 6.73%, respectively). The study found that this pattern was consistent with the factor structure of the original scale.

Results of Reliability

Internal Consistency Analyses

The internal consistency coefficients of the four factors, Acute Illness General Well-Being, Emotional Health and Modelling ranged between .58 and .92.

Test-Retest And Split-Half Reliability

The Spearman-Brown coefficient for the split-half reliability of the entire FIH-PS was calculated as 0.81. The sub-dimensions of the FIH-PS exhibited coefficients of .70 for Acute Illness, .60 for General Well-Being, .89 for Emotional Health, and .90 for Role Modelling.

Furthermore, the test-retest coefficient for the entire scale was calculated to be 0.72 ($p=0.01$). The test-retest coefficients for the Acute Illness and Emotional Health sub-dimensions of the FIH-PS were calculated as .92 and .80, respectively ($p=0.01$), while those for the General Well-Being and Role Modelling sub-dimensions were calculated as .58 and .60, respectively ($p=0.05$).

Results of Criterion-Related Validity

To determine the criterion-related validity of the questionnaire, we examined the correlation coefficients between the sub-dimensions of the FIH-PS (Acute Illness, General Well-Being, Emotional Health, and Role Modelling) and the sub-dimensions of the FIS (Arbitrary Occupation, Attention and Closeness and Primary Care). Significant correlations were found between the total and sub-dimensional scores of the FIS and FIH-PS.

Discussion

The findings of the study confirmed the original four-factor structure of the FIH-PS and demonstrated sufficient consistency and reliability. Therefore, the Turkish version of the FIH-PS consists of four subscales: General Well-being, Acute Illness, Emotional Health, and Role Modelling, which are consistent with the original version. The analyses showed that the FIH-PS is psychometrically valid and reliable, allowing for separate evaluation of father involvement in different dimensions. This study presents a comprehensive scale for assessing father involvement in preschool health in Turkey.

In conclusion, the FIH-PS represents a significant measurement tool, providing a comprehensive assessment of fathers' involvement in health processes and the development of strategies to enhance this involvement. The application of the scale across diverse demographic and clinical samples will offer a valuable basis for research and interventions on child health and family dynamics.