ADAPTATION OF THE FAMILY HARDINESS INDEX (FHI) INSTRUMENT FOR INDONESIAN ADOLESCENTS

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Abstract

Family resilience in adolescence measures the ability to cope with challenges and disruptions within the family and engage in positive adaptation in their role as children. To address the limitations of the availability of family resilience measurement tools in the Indonesian language, this study aims to adapt and test the reliability and validity among adolescents. One widely used measurement tool for assessing family resilience internationally is the Family Hardiness Index (FHI), developed as part of The Resilience, Adaptation, and Well-Being Project. The testing was conducted on 276 participants aged 12–17 years (M = 14.5; SD = 1.7), with a gender distribution of 124 males (45%) and 152 females (65%). Psychometric property testing revealed that this adapted instrument met reliability criteria with a Cronbach's alpha value of 0.75 and fulfilled construct validity criteria using confirmatory factor analysis. Through these findings, it is hoped that research related to family resilience for Indonesian adolescents will continue to advance, particularly among families facing various challenges and disruptions. Additionally, multiple suggestions and implications arising from this adaptation are discussed in the concluding section of this article.

Keywords: adolescent family resilience, family hardiness index, psychometric adaptation, reliability, validity

Alat Ukur *Family Hardiness Index* (FHI) untuk Remaja Indonesia

Abstract

Resiliensi keluarga pada usia remaja diukur untuk melihat kemampuan dalam menghadapi tantangan dan disrupsi dalam keluarga dan melakukan adaptasi positif dalam perannya sebagai anak. Untuk mengatasi keterbatasan kesediaan alat ukur resiliensi keluarga dalam Bahasa Indonesia, penelitian ini bertujuan untuk melakukan adaptasi serta menguji reliabilitas dan validitas kepada usia remaja. Salah satu alat ukur yang mengukur resiliensi keluarga dan telah digunakan dalam berbagai penelitian secara internasional adalah *Family Hardiness Index* (FHI) yang merupakan alat ukur dari *The Resilience, Adaptation and Well-Being*. Pengujian dilakukan terhadap 276 partisipan dengan rentang usia 12–17 tahun (M = 14,5; SD = 1,7), dengan distribusi jenis kelamin yaitu 124 orang laki-laki (45%) dan 152 orang perempuan (65%). Uji properti psikometri menemukan bahwa hasil adaptasi ini telah memenuhi kriteria reliabilitas dengan nilai Cronbach's alpha sebesar 0.75 dan memenuhi kriteria validitas konstruk menggunakan *confirmatory factor analysis*. Melalui hasil ini, diharapkan penelitian terkait resiliensi keluarga untuk remaja Indonesia menjadi semakin berkembang khususnya kepada keluarga-keluarga yang mengalami berbagai tantangan dan disrupsi. Terdapat juga berbagai saran dan implikasi dari hasil adaptasi ini terhadap perkembangan penelitian terkait resiliensi keluarga pada usia remaja pada bagian akhir dari artikel ini.

Keywords: adaptasi alat ukur, *family hardiness index,* reliabilitas, resiliensi keluarga remaja, validitas

INTRODUCTION

Resilience is an important aspect of human life as it serves as a protective factor that can shield individuals from various disruptions. Masten (2016) explains that resilience is a positive outcome or recovery despite individuals experiencing challenges or threats to their developmental processes. In the context of family structure, McCubbin and McCubbin (1988) describe family resilience as the characteristics and properties of a family system that help its members withstand disruptions and navigate obstacles and crises. This enables them to focus on positive adaptation and growth. Ungar (2016) also defines family resilience as an interaction process within the family system in facing challenges, ultimately facilitating positive coping abilities over time. MacPhee et al. (2015) explain that when families face challenges or transitions, there is a regulatory process involved in the family system's adaptation abilities, including creating routines, regulating

emotions, organizing family structure, and providing support among family members. This aligns with McCubbin and McCubbin's (1988) definition that resilient families are those who can effectively utilize resources and instruments both within and outside the family to protect the family system from disruptions. This ability ultimately supports positive adjustment to the situations faced.

McCubbin and McCubbin (1988) elaborate that family resilience is characterized by inner strength with beliefs that the family has control over difficult times, the ability to find meaning in life, and a commitment to learning and exploring various experiences and challenges together. In terms of behavioral indicators, family resilience is marked by the family's ability to develop trust and respect among family members, mutual appreciation, confidence that the family can navigate difficult times together, a positive outlook on life goals, and the ability to plan for the future. It is undeniable that various external factors can influence family dynamics. However, McCubbin and McCubbin (1988) explain that families with good family resilience feel that each member has control over the good and bad occurrences and are not victims of circumstances or disruptions.

Everri et al. (2022) explain that one disruption in family systems that is currently prevalent is related to technological advancements. This research found that technology use can lead to distractions and interruptions in face-to-face family communication. Moreover, excessive technology use can predict increased parental conflict and decreased levels of well-being. Technology is also one of the biggest sources of disruption experienced by Indonesian adolescents (Benty et al., 2020; Dewi et al., 2021; Sari et al., 2020).

In facing those disruptions, Everri et al. (2022) found that family resilience is a protective factor that can improve the quality of relationships between spouses, parents, and children and predict increased well-being for both parents and children. Bethell et al. (2019) also found that family resilience in adolescents is a predictor of flourishing. This is consistent with Herbell et al. (2020), who found that family resilience predicts the well-being of adolescents with mental, emotional, and behavioral issues. Van Schoors et al. (2015) also stated that family resilience is a protective factor against emotional maladjustment, conflict, social isolation, and psychological dysfunction in adolescents diagnosed with cancer. Qiu et al. (2021) also found that family resilience has a positive correlation with prosocial behavior and a negative correlation with difficulties in psychosocial adjustment. Therefore, adolescents' family resilience is an important variable to measure as it is a protective factor found to shield adolescents from various psychological issues.

Family resilience in adolescents also affects the dynamics of relationships within family members. Finklestein et al. (2022) found that adolescents play a significant role in the level of resilience within the entire family. The family resilience scores of adolescents serve as mediators in the relationship between parental scores and the decrease in anxiety levels when the family faces challenges. This demonstrates that measuring family resilience involving adolescents is important as it can impact family dynamics.

Weeland et al. (2021) elaborate on the interconnectedness within families, emphasizing that all members influence each other directly and indirectly. Therefore, understanding one individual's perspective requires insight into their interactions within the family system. Finklestein et al. (2022) further assert that family resilience arises from collective interactions and shared processes among members. Consequently, studying family resilience involving adolescents is essential for a comprehensive family perspective.

Saetes et al. (2017) stated that studies on family resilience generally focus on adults and have not extensively involved younger age groups. However, developmental factors, such as cognitive and social aspects, can provide new insights into the growth of family resilience at each developmental stage. Therefore, research on family resilience in adolescence is needed to enrich our understanding of the development of family resilience during adolescence. Research on family resilience in adolescence also provides a comprehensive overview of the dynamics of each family member in facing various disruptions experienced by adolescents in their role as children.

In Indonesia, there are studies related to resilience in adolescents, such as those related to family factors, ecology, threats, and protective factors contributing to self-resilience (Salamah et al., 2023; Sunarti et al., 2017; Wardhani & Sunarti, 2017). For adolescents with specific populations, there are studies targeting adolescents from broken homes, bullying victims, victims of dating violence,

victims of parental violence, etc. (Ambarwati, 2017; Detta & Abdullah, 2017; Putu & Putu, 2023; Yuliani et al., 2018). However, these studies focus on individual resilience. Meanwhile, the definition of family resilience described by McCubbin and McCubbin (1988) has different characteristics from individual resilience. Furthermore, based on the various studies previously discussed, family resilience is also a protective factor that needs to be considered in various studies involving adolescents from diverse adverse backgrounds. Therefore, there is still potential for developing research focusing on family resilience in adolescents using an instrument specifically designed for family resilience.

There are various resilience measurements for adolescents that have been adopted into the Indonesian language, such as the Child and Youth Resilience Measure-Revised (CYRM-R) by Borualogo and Jefferies (2019), which measures individual abilities to face various life challenges and utilize external resources; the Resilience Scale by Hayatini and Dimyati (2020), which measures aspects of emotional regulation, impulse control, optimism, causal analysis, empathy, self-efficacy, and the ability to build connections with others; the Academic Resilience Scale by Ramdani et al. (2020), which measures student resilience in academic contexts; and the Resilience Scale for Adolescents (READ) by Rofiqah et al. (2023), which measures self-competence, social competence, family support, and social resources. Based on the mapping of these instruments, it can be seen that resilience measurement in adolescents focuses on individual aspects, such as self-competence, emotional regulation, and various other positive aspects of individual personality. Moreover, there is no family resilience measurement focusing on assessment and the relationship with the family while positioning adolescents as part of the family.

McCubbin et al. (1996) designed an instrument to measure family resilience called the Family Hardiness Index (FHI), part of The Resilience, Adaptation, and Well-being project. Dunst (2021), in a meta-analysis study, found that the FHI instrument is the most frequently used and proven to have good reliability and validity in various population samples. Based on the mapping conducted, there are 53 studies from reputable international journals that used the FHI instrument on family samples with children diagnosed with chronic diseases, children with psychopathology, children with disabilities, premature babies, adopted children, children of divorced parents, children with parents with dementia, children with one deceased parent, and families with low socioeconomic status (Bishop & Greeff, 2015; Chen et al., 2015; Choi, 2015; Deist & Greeff, 2015; Duca, 2015; Gralton, 2017; Greeff et al., 2014; Greeff & Lawrence, 2012; McStay et al., 2014; Persson et al., 2016). The FHI instrument has also been adapted into various languages such as Afrikaans, Mandarin, Slovenian, Spanish, Thai, and Xhosa (McCubbin Resilience, 2016).

The FHI instrument consists of 20 items divided into three subscales: commitment, challenge, and control. The commitment subscale measures family members' understanding of internal strengths, interdependence, and ability to work together to face various challenges while striving for a meaningful life. The challenge subscale assesses the family's efforts in future planning, promoting innovation and proactivity, and embracing continuous learning in new situations. Finally, the control subscale evaluates the family's perception of having agency over their lives, regardless of chance events or external factors. Based on the theoretical foundation and definitions of each subscale, FHI contains items that align with the activities, habits, lifestyles, and perspectives of families in Indonesia, making it a relevant measurement tool for the adolescent population in Indonesia.

Although the FHI instrument is not specific to any age group, previous research has only tested its validity and reliability on adult participants. However, there is a need for measurement of all family members, including adolescents, to provide an overview of family resilience. Furthermore, this adaptation also addresses the need to measure family resilience during the adolescent developmental stage, as Saetes et al. (2017) highlighted, indicating that adolescents possess unique cognitive and emotional characteristics. Therefore, research is necessary to understand the developmental process of family resilience during adolescence. This shows that an adaptation, reliability testing, and validity of the FHI instrument are needed to ensure it can also be used in adolescents.

METHOD

Research Design, Location, and Time

The research began with submitting an ethical review to ensure that all data collection procedures adhered to ethical standards and could minimize any perceived risks or negative

impacts on participants. This study is a part of research about family resilience and quality of life of families with children with epilepsy and obtained ethical approval from Konsorsium Psikologi Ilmiah Nusantara (KPIN) with reference number 086/2023 Etik/KPIN on September 12, 2023, stating that the research could be conducted with controlled risks. This research was conducted in Indonesia using a quantitative design from September 29, 2023, to October 14, 2023.

Sampling Technique

Data collection was conducted using purposive and snowball sampling. The criteria for selecting research subjects are Indonesian adolescents aged 12–17 years old. Before participants completed the questionnaire, parents had to fill out a parental consent form granting permission for their child to participate in the study. The total sample obtained consisted of 276 participants with an age range of 12–17 years (M = 14.5; SD = 1.7), with a gender distribution of 124 males (45%) and 152 females (55%).

Data Collection Procedure

Data collection was conducted using an online questionnaire via the Google Forms platform. To ensure that all participants obtained consent from their parents, the researchers distributed questionnaires to teachers and parents to be acknowledged by adults first. If parents do not provide consent, they cannot proceed to the next page of the questionnaire. After completing the questionnaire, participants were provided with a debriefing that explained the definition of variables and the purpose of the research.

Measurement and Assessment of Variables

The FHI instrument consists of 20 items divided into 3 subscales, which can be seen in Table 1. Each item is answered using a self-report method using a 4-point Likert scale (False = 3, Mostly False = 2, Mostly True = 1, True = 0), where higher values indicate better family resilience.

The Family Hardiness Index (FHI) was previously translated into Indonesian by Puspita (2011) using the forward and back translation method, which involved four English Literature scholars. The translated results were also consulted with experts in the field of Psychology to assess content validity and conduct readability tests on several research samples before data collection. The translated

instrument was tested on 100 participants aged 22–61 years. In the psychometric testing, this translation was found to have a Cronbach's Alpha reliability coefficient of 0.72. Referring to the reliability criteria by Kaplan and Sacuzzo (2005), the reliability coefficient obtained from this translation fell into the acceptable category.

The instrument was then proofread by a junior high school Indonesian language teacher from an A-accredited school in Jakarta, ranked 7th nationally and 3rd provincially in the 2022 State University Entrance Test (UTBK) results, with a total of 530 junior high school students and 807 high school students in 2023, according to the Institute for Lembaga Tes Masuk Perguruan Tinggi (LTMPT). This school was selected to ensure the quality of proofreading results and provide recommendations aligned with the cognitive and language abilities of adolescents aged 12–17. The large student population enhances the relevance of the proofreader's input. Only one proofreader was involved because the initial results indicated satisfactory outcomes, allowing the research to proceed without major revisions.

The next stage involved readability testing with 10 adolescents aged 12–17 years (M = 14.7 years; SD = 1.16), consisting of 4 males and 6 females. Through this readability test, it was ensured that all adaptations were appropriate for the reading abilities of adolescents aged 12–17 years. Additionally, all adolescent participants provided positive feedback, stating that they could understand the instrument, and none of the readability test participants reported difficulties in the completion process.

Table 1 Family Hardiness Index (FHI) subscales & item sample

Subscale	Item No.	Item Sample
Control (CO)	1*, 2*, 3*, 10*, 19, 20	*20. Keluarga saya menyadari bahwa kehidupan dikontrol oleh kebetulan dan keberuntungan.*
Commitment (CM)	4, 5, 6, 7, 8*, 9, 11, 18	*6. Seringkali saya merasa percaya bahwa di balik kesulitan pasti ada jalan.*
Challenge (CH)	12, 13, 14*, 15, 16*, 17	*16. Lebih baik tinggal di rumah daripada keluar dan berinteraksi dengan orang lain.*

Note. *unfavorable item; No.=number

Table 2 *Corrected item-total correlation* (CITC) summary of each Family Hardiness Index (FHI) item (n=276)

Subscale	CITC	Item	Total Item	%
Challenge (CH)	r < 0.2	CH3, CH5	2	33.3
	r > 0.2	CH1, CH2, CH4, CH6	4	66.7
Commitment (CM)	r < 0.2	-	0	0
	r > 0.2	CM1, CM2, CM3, CM4, CM5, CM6, CM7, CM8	6	100
Control (CO)	r < 0.2	-	0	0
	r > 0.2	CO1, CO2, CO3, CO4, CO5, CO6	6	100

Data Analysis

The data analysis was conducted using R Studio software. Two reliability tests were conducted in this study. The first reliability test is Cronbach's alpha, with the criteria from Kaplan and Sacuzzo (2005) stating that the lower limit of the reliability value to determine that a measurement tool can be considered reliable is 0.7. The second reliability test was item analysis using the corrected item-total correlation (CITC) values. According to Nunnally and Bernstein (1994), the threshold for CITC values considered to have good reliability is > 0.2.

The validity test conducted was construct validity using confirmatory factor analysis to prove that the Family Hardiness Index (FHI) has three subscales according to the design by McCubbin et al. (1996). The testing criteria use references from Hu and Bentler (1999), namely

(1) CFI >= 0.9, (2) TLI >= 0.95, (3) RMSEA < 0.08, (4) SRMR < 0.08, with each item's factor loading > 0.4.

RESULTS

Based on the data obtained, it was found that the average family resilience score of Indonesian adolescents measured using the Family Hardiness Index (FHI) is 35.67 (SD = 6.42; Min = 17; Max = 58). The adaptation & psychometric property test of the FHI instrument aims to ensure that all items are well understood and to assess whether the instrument has good validity and reliability in adolescents. In the first reliability test, it was found that the Cronbach's alpha value of the overall instrument was 0.75. Therefore, it can be concluded that, overall, the FHI instrument is reliable.

Table 3 Factor loading summary of each Family Hardiness Index (FHI) item (n=276)

Subscale	Factor Loading	Item	Total Item	%
Challenge (CH)	< 0.4	CH3, CH5	2	33.3
	> 0.4	CH1, CH2, CH4, CH6	4	66.7
Commitment (CM)	< 0.4	-	0	0
	> 0.4	CM1, CM2, CM3, CM4, CM5 CM6, CM7, CM8	6	100
Control (CO)	< 0.4	-	0	0
	> 0.4	CO1, CO2, CO3, CO4, CO5, CO6	6	100

Based on each subscale, it was found that the reliability values of the challenge subscale were 0.34, the commitment subscale was 0.84, and the control subscale was 0.84. Based on these results, it appears that the challenge subscale does not yet have good reliability. Therefore, the next test conducted was item analysis using the corrected item-total correlation (CITC) values to see if the items in this instrument have good correlation and interrelatedness in measuring the construct. The FHI instrument is a multidimensional measurement tool. Therefore, CITC calculations were performed for each subscale separately. In this item analysis, CITC values <0.2 will be considered for revision.

Through item analysis per subscale (Table 2), it was found that 2 items in the challenge subscale do not meet the criteria for CITC values. However, overall, the reliability values in the FHI instrument still meet the criteria for good reliability, so these items are retained with some revision recommendations. Nevertheless, the researcher attempted a second test of this subscale by eliminating items with CITC values below 0.2, namely items with codes CH3 and CH5. After eliminating these items, the reliability test for the challenge subscale improved from 0.34 to 0.89. Furthermore, the overall reliability value of the items also increased from 0.75 to 0.77. Therefore, it can be concluded that after improving the challenge subscale, all FHI instrument subscales meet the reliability criteria and have good internal consistency.

The next test conducted was the validity test using confirmatory factor analysis (CFA) with a 3-factor model. This test found that the CFA indicators' values almost entirely meet the criteria with values of TLI = 0.95, CFI = 0.94, RMSEA = 0.07, and SRMR = 0.03. Furthermore, a factor loading analysis was also conducted to see if there were items with factor loadings < 0.4. The table below shows the summary of factor loadings for each item.

Factor loading analysis identified the same issue as CITC, where items CH3 and CH5 had factor loading values that did not meet the criteria (Table 3). However, the reliability and validity values of this measurement tool have met the criteria stated in the data analysis subchapter. Therefore, these items will still be retained, with some considerations to be discussed in the discussion section. The table below (Table 4) presents the integration table of subscale, item code, CITC values, and factor loadings.

Table 4 Psychometric integration table for Family Hardiness Index (FHI) (n=276)

Subscale	Item Code	CITC	Cronbach's Alpha	Factor Loading
Control (CO)	CO1*	0.693	0.828	0.815
	CO2*	0.644	0.837	0.825
	CO3*	0.711	0.825	0.790
	CO4*	0.622	0.841	0.665
	CO5	0.649	0.836	0.769
	CO6	0.584	0.848	0.820
Commitment (CM)	CM1	0.638	0.942	0.727
	CM2	0.817	0.927	0.892
	CM3	0.835	0.926	0.903
	CM4	0.832	0.926	0.904
	CM5	0.423	0.938	0.653
	CM6	0.824	0.927	0.897
	CM7	0.817	0.927	0.906
	CM8	0.822	0.927	0.911
Challenge (CH)	CH1	0.807	0.846	0.902
	CH2	0.704	0.884	0.378
	CH3	0.138	0.622	0.650
	CH4	0.805	0.847	0.912
	CH5	0.132	0.640	0.357
	CH6	0.743	0.870	0.895

Note. *unfavorable item

Table 5 Family Hardiness Index (FHI) item revision

Item Code	Before Revision	Original Item	After Revision
CH3	*Keluarga saya cenderung melakukan hal yang sama berkali-kali.*	*We tend to do the same things over and over...it's boring.*	*Keluarga saya cenderung melakukan hal yang sama berkali-kali. Hal ini terasa membosankan.*
CH5	*Lebih baik tinggal di rumah daripada keluar dan berinteraksi dengan orang lain.*	*It is better to stay at home than go out and do things with others*	*Lebih baik tinggal di rumah daripada keluar dan beraktivitas bersama yang lain.*

Note. CH=Challange (subscale of FHI)

Based on the reliability and validity analysis, it was found that 2 items in the challenge subscale resulted in poor reliability. To address this issue, the researchers then examined the statements in the original measurement and found that the translations of these 2 items were not equivalent. Therefore, these items will be revised to have contexts more consistent with the original items. Explanations regarding the results of these revisions will be discussed in the discussion section. The Table 5 shows the comparison table of Indonesia, English, and the revised results.

DISCUSSION

The Family Hardiness Index (FHI) measurement tool is a multidimensional instrument consisting of 20 items divided into 3 subscales: challenge, commitment, and control. Based on all psychometric tests conducted, this study successfully adapted the Family Hardiness Index (FHI) measurement tool by McCubbin et al. (1996) with good validity and reliability for adolescents. Therefore, this measurement tool can be used to research family resilience in adolescents aged 12–17 years. The adaptation of this measurement tool is hoped to inspire further research focusing on family resilience variables to consider when involving participants in adolescence. Research on adolescents is expected to provide a more comprehensive understanding of the dynamics among family members. Furthermore, research on family resilience at the adolescent developmental stage can also provide insights into the trajectory, process, and dynamics of the growth of family resilience as individuals age.

However, some item revisions may be necessary to improve reliability. Upon further examination, there are 2 items in the challenge subscale that resulted in low reliability, which are CH3 and CH5. Based on the factor loading values, these two items also have the lowest factor loading values compared to other items.

The low factor loading values indicate that these two items cannot measure the construct of family resilience well. This is also consistent with the reliability values of the challenge subscale, which are lower than those of the other two subscales. Additionally, the corrected item-total correlation (CITC) values also indicate that these two items have values below the criteria. This means that these two items have low correlations with other items, and it can be assumed that they have poor validity. Therefore, these two items need to be considered to improve the reliability and validity of the FHI measurement tool.

Item CH3 reads "We tend to do the same things over and over...it's boring," translated into Indonesian as "*Keluarga saya cenderung melakukan hal yang sama berkali-kali.*" This item is designed based on McCubbin and McCubbin's (1988) assertion that one characteristic of family resilience is the family member's ability to engage in new activities and encourage each other to learn and try new things as part of the adaptation process. Chew et al. (2018) also suggest that adolescents with good family resilience are characterized by openness to new experiences and seeking new solutions or problem-solving methods. Conversely, excessive fear of new things can hinder the growth of family resilience. Therefore, item CH3 aims to illustrate that repetitive and monotonous behaviors within the family are boring and contrary to family resilience. However, when translated into Indonesian, the context of this item is not well articulated due to the truncated phrase "it's boring." Based on this translation, participants may perceive this item as a positive activity undertaken by their families, indicating that the family has well-planned routines. This is consistent with Harrist et al. (2019), who explain that family routines are an adaptive factor that fosters family resilience. Therefore, it is recommended that this item be revised to

emphasize the context of boredom and better align with the original item's context.

The second item with low reliability is CH5, which reads "It is better to stay at home than go out and do things with others," translated into Indonesian as "*lebih baik tinggal di rumah daripada keluar dan berinteraksi dengan orang lain.*" Similar to item CH3, this item is designed to consider courage and openness to new experiences outside the family environment. McCubbin and McCubbin (1988) explain that individuals with good family resilience tend to be more open and willing to engage in new activities with others. Fessler et al. (2014) explain that when someone becomes a parent, they tend to have a heightened perception of environmental dangers and view the outside environment as unsafe for children. Parents also teach about the "stranger danger" concept to prevent children from easily approaching strangers. This perception of danger is then transmitted to children through parenting methods that lead them to be wary of strangers and protect themselves at home. In the context of item CH5, the word that is chosen is related to interaction with others. Therefore, this phrase may be misunderstood as interaction with strangers. Children may also perceive that staying at home and not interacting with others is consistent with the teachings of their parents. However, the context of the item intended by McCubbin et al. (1996) is openness and feeling safe in engaging in new activities outside the family environment, not limited to interacting with strangers alone. Hence, this item is recommended to be revised to "*lebih baik tinggal di rumah daripada keluar dan beraktivitas bersama yang lain*" to better reflect the original item context.

This study also has limitations that have been acknowledged. The first limitation concerns the number of proofreaders involved, including only one junior high school teacher. This limitation can potentially diminish the relevance of word selection tailored for adolescents. Therefore, future research could consider involving proofreaders from both junior high school and senior high school levels, as well as synthesizing the inputs from all proofreaders involved. The second limitation concerns the number of participants obtained. Despite the use of an online form distributed to all students in Indonesia, which should have the potential to recruit a large number of participants, there were several challenges related to the short duration of the study. Nevertheless, the obtained number of participants demonstrated good reliability and validity. However, the

researcher still recommends further research with more participants.

Lastly, the third limitation of this study is related to the validation testing, which was limited to construct validity using confirmatory factor analysis (CFA). There are other validation methods that can be considered to improve the validity of this measurement, such as criterion validity, which measures how strongly the results of this measurement tool are related to other variables that have been proven as outcomes (Taherdoost, 2016). Maurović (2020) explains that family resilience produces positive outcomes within the family, such as family functioning, satisfaction with family relationships, and finding meaning in family issues. Based on previous research, family resilience variables have been shown to have a strong correlation with communication among family members (Park et al., 2022), the level of satisfaction with external support (Fong et al., 2021), and flourishing (Bethell et al., 2019). Additionally, McCubbin and McCubbin (1988) explain that family communication, stress management skills, and support and motivation among family members are characteristics of family resilience. Therefore, further validity testing may consider these variables to ensure that the Family Hardiness Index (FHI) measurement tool has met criterion validity.

CONCLUSION AND SUGGESTION

The adaptation of the Family Hardiness Index (FHI) measurement tool involved a series of steps, including translation, synthesis, back translation, expert judgment, readability testing, and psychometric testing related to the validity and reliability of the measurement tool. Based on these assessments, it was found that the FHI measurement tool, consisting of 20 items divided into three subscales, exhibited good reliability and validity, taking into account translation revisions for items CH3 and CH5.

Regarding suggestions and implications for further research, the adaptation of the Family Hardiness Index (FHI) into Indonesian and for adolescents is expected to provide opportunities for researchers to expand their knowledge on family resilience, particularly among Indonesian adolescents. Research on family resilience in adolescence can also provide insights for educators and policymakers to consider the development of family resilience as a protective factor that can enhance adolescent well-being. Empirical research on family resilience in adolescence is also expected to serve as a basis for interventions

aimed at developing family resilience as a protective factor in facing various challenges and disruptions experienced by families.

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