



Evidence of the validity of the fairness character scale for adolescence: A Confirmatory Factor Analysis (CFA) technique

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Abstract: The characteristic of fairness is a virtuous one that adolescents should possess as capital to interact with their social environment. However, no validity of evidence supports the score interpretation of a fairness character scale. The purpose of this study is to obtain evidence for the validity of the scale for adolescents. The research data were collected from 532 adolescents in Indonesia, ranging in age between 14 and 18 years. Scale development covers all stages of the process by assessing the required validity and reliability of evidence. Based on the ratings obtained from the scale, exploratory and confirmatory factor analysis were performed to identify the internal structure of the validity evidence. The results of the factor analysis found that the scale consisted of four factors, namely "exploitation", "appreciation", "social role", and "open behaviour". Cronbach alpha's internal consistency value was calculated to be .84. After completing all stages of the scale development, 20 items related to the characteristic of fairness were obtained. Therefore, the scale can be used by positive psychology developers to measure and identify the development of fairness in adolescents in Indonesia. The scale will complement the previously developed character strength measurement tools.

Keywords: adolescents; fairness; fairness character scale; validity

Abstrak: Karakter keadilan (*fairness*) merupakan karakter kebajikan yang harus dimiliki remaja sebagai modal untuk berinteraksi dengan lingkungan sosialnya. Namun, tidak ada bukti validitas yang mendukung interpretasi skor skala karakter *fairness*. Tujuan dari penelitian ini adalah untuk mendapatkan bukti validitas skala karakter *fairness* pada remaja. Data penelitian saat ini dikumpulkan dari total 532 remaja di Indonesia yang berusia antara 14 hingga 18 tahun. Pengembangan skala mencakup semua tahapan proses dengan menilai bukti validitas dan reliabilitas yang diperlukan. Berdasarkan peringkat yang diperoleh dari skala, analisis faktor eksplorasi dan konfirmasi dilakukan untuk mengidentifikasi struktur internal bukti validitas. Hasil analisis faktor didapatkan bahwa skala terdiri dari empat faktor yaitu "*exploitation*", "*appreciation*", "*social role*", dan "*open behavior*". Nilai konsistensi internal Cronbach Alpha dihitung menjadi 0,84. Setelah menyelesaikan semua tahapan pengembangan skala, diperoleh 20 item dalam skala karakter *fairness*. Sehingga, skala ini kemudian dapat digunakan oleh para pengembang psikologi positif untuk mengukur serta mengidentifikasi perkembangan karakter *fairness* pada remaja di Indonesia. Skala ini akan melengkapi alat ukur kekuatan karakter yang pernah dikembangkan sebelumnya.

Kata Kunci: remaja; *fairness*; skala karakter *fairness*; validitas

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Introduction

Strength of character is important for adolescents, helping them achieve virtues and develop positive traits reflected in thoughts, feelings, and behavior (Park & Peterson, 2008). One of the main character strengths in the character hierarchy is justice, which has the power of fairness (Park & Peterson, 2009). Adolescents are characterized by justice and have the strength of fairness will contribute to the emergence of healthy community life. They will be able to conduct social interactions in a balanced way with understanding and acceptance of other people (Scaini & Caputi, 2018). Rubin et al. (2006) explain that relationships in society become significant if adolescent relationships are meaningful and balanced, with understanding of each other and acceptance of the opinions of others. The strength of the character of fairness in adolescents will encourage them to place justice as a key factor in the process of interaction in society. Adolescents with the characteristic of justice will be able to make subjective judgments between self-interest and the interests of others (Van Dijk & Vermunt, 2000). When the character of fairness strengthens adolescents, they will have concern for others, known as equity. Therefore, the comparative component results in caring behavior towards others in social interaction.

Fairness means not taking advantage of other people's weaknesses for personal gain, respecting others, obeying the rules, and being transparent and fair to others (Macleod, 2014). The character of fairness is manifested through an attitude that treats other individuals without discrimination. Teens with this strength of character do not let their feelings influence their negative view of others. They will allow everyone to try and apply the same sanctions according to their mistakes (Rubini et al., 2018).

Fairness is one of the strengths of the character of justice that must be possessed and

developed in adolescents (Borba, 2008). Through these characteristics, they will try to create a healthy social and community life with harmonious interactions between individuals and groups (Sivo et al., 2017). Behaving fairly and using the principle of pluralism with others without considering intuitionism is part of such a character (Soetoprawiro, 2010). Based on the opinion of these experts, it can be seen that it is important that teenagers develop this type of character.

Various kinds of problems can arise in adolescents who do not possess the character of fairness (Suparwi, 2014). Coyne et al. (2019) found that the character of fairness is related to preventing bullying, intimidation, aggressive behavior, and other violent behavior in adolescents. Those who have this character strength will be able to adopt a fair attitude towards themselves and their environment, thinking of themselves as creatures that are the same as other people. Therefore, adolescents will avoid violent behavior such as bullying.

Book et al. (2012) state that adolescents will avoid bullying behavior when the focus is on developing the strength of the character of fairness within them. That is, the stronger the development of this characteristic in adolescents, the lower the risk of bullying behavior and vice versa. Hilliard et al. (2014) explain the relationship between fairness and bullying. Their findings indicate that bullying behavior that occurs in adolescents is due to a lack of understanding and concern for the welfare of others. Therefore, to reduce bullying and other negative attitudes, efforts are needed to increase the strength of the character of fairness in adolescents.

However, the current condition of injustice in adolescents is a shared responsibility. One of the rife conditions of injustice is the bullying that occurs among adolescents (Setyaputri et al., 2018). The Indonesian Child Protection Commission

(2022) states that as many as 87% of children have experienced violence, including bullying. The National Consortium for Character Development (2020) noted that bullying occurs in almost every school with negative impacts. Based on gender, slightly more females (50.5%) experience bullying than males (Krisnana et al., 2021). Kustanti (2015) provides an overview of bullying behavior in the city of Semarang based on the results of descriptive research, showing that most adolescents at all levels of education have experienced bullying. The percentage is concerning at the secondary school level (70%).

In addition, the development of the character of justice in adolescents is influenced by local cultural values (Setyaputri et al., 2018). It is because the concept of justice develops through social interaction among adolescents and involves internalized social and moral values. In the process of social interaction among adolescents, fairness emerges as a key concept; adolescents should not only be motivated by for personal gain, but also consider the interests of others (Kwak et al., 2017). Behavioral studies have been conducted in recent years. Their results show that individuals are not purely rational beings, aiming to maximize their own benefits. Instead, they also pay attention to the relative advantages obtained from their environment (Camerer, 2003).

When social-behavioral processes occur, the subjective comparative component of decision-making is associated with fairness judgments. It takes place because individuals implement a comparison process between their benefits and those of others. This process will provide individuals with additional aspects of social competence and emotional involvement in decision-making.

When a decision-making process involves considerations of fairness, individuals will identify several steps that occur automatically. In addition, they will automatically integrate the context-

related information they receive into the decision-making process to evaluate further comparisons. Intentionality is one type of context-dependent information that significantly influences the judgment of justice; that is, the concept of justice that is influenced by interaction partners (Kwak et al., 2017). An act that appears to be unjust is likely to have a less negative impact if one believes it was not done on purpose.

Positive psychology researchers have attempted to develop measuring tools for character strength through self-reports. In 2000, Peterson and Seligman, assisted by students from the University of Pennsylvania, compiled most of the Values in Action Inventory of Strength (VIA-IS) items tested on 250 young people. In Indonesia, this tool has been used for research on character strength in nurses. It was adapted by Lestari (2006) and its validity and reliability have been evaluated, while the instrument for measuring the character of fairness has been independently developed and tested. However, the justice scale developed continues to focus on service behavior towards consumers (Ting, 2013), including consumers of financial services (Devlin et al., 2014); fairness prices based on the managerial approach (Chung & Petrick, 2015); and banking services from an equity perspective (Bhatt, 2020). There is no separate measurement tool regarding the strength of the character of justice, especially fairness in adolescents, for positive psychology developers in Indonesia. Therefore, a measurement tool is needed that can describe the development of the character of fairness in adolescents in Indonesia. Positive psychology developers could later use it to describe the concept of justice adolescents possess and help develop it.

Methods

Participants

Five hundred thirty-two (532) teenagers participated in the study, studying at secondary schools (junior high and high schools) in several

cities in Indonesia in the 2021-2022 academic year. They were aged between 14 and 18 years and lived on several major islands in Indonesia, such as Java, Sumatra, Kalimantan, and Sulawesi. They comprised 229 (43%) men and 303 (57%) women. 201 (38%) were at the junior high school level and 331 (62%) at high school. Details of the distribution of the participants are shown in Table 1.

Item Development

The first stage in developing a justice character scale to measure justice in adolescents was to review some of the results of previous research on this theme (Memiş, 2018; Saydam, 2018). In the second stage, theoretical studies and analysis from various sources related to the character of justice in adolescents (Borba, 2001; Josephson, 2006). This research developed several aspects of the character of fairness in adolescents, including 1) exploitation, related to the behavior of adolescents who tend to take advantage of other people's weaknesses (i.e., it is normal if other people's weaknesses can be exploited); 2) appreciation, a behavioral tendency to respect the conditions of other people (i.e., everyone has different abilities); 3) social role, the behavioral tendency to obey the rules (i.e., it is embarrassing if you act in disobedience of the

rules); 4) open behavior, behavioral tendencies to accept conditions that are different from habits (i.e., differences in opinion during discussions can be interesting). These aspects were then translated into several forms of statement items for the teenagers, consisting of 11 items they liked and nine items they didn't like, aimed at the process of reflecting on themselves.

Expert Review (Content Validity)

The focus of activities at this stage was on the content evidence-based validity. The success of a measuring tool in predicting individual behavior can be seen from evidence concerning its validity and reliability (Büyüköztürk & Çokluk-Bökeoğlu, 2008). Validity refers to the extent to which evidence and theory support the interpretation of test scores for the proposed test use (AERA, APA, & NCME, 2014). The validity process was conducted on 25 items of the fairness character scale through expert review. Experts were involved in the review process to assess whether statement items could cause misunderstanding and whether they were appropriate in relation to the character of fairness in adolescents. Based on the feedback provided by experts, two items were amended, namely "I try to work responsibly" to "I try to perform my responsibilities independently according to my abilities", and "I am accustomed

Table 1
Participant Distribution

Domicile	Gender	Total	Percent
Java	Male	77	14%
	Female	138	26%
Sumatra	Male	65	12%
	Female	56	11%
Kalimantan	Male	46	9%
	Female	65	12%
Sulawesi	Male	38	7%
	Female	47	9%
Total		532	100%

to taking advantage of other people's weaknesses" was altered to "Utilizing others for personal gain is an act that is not commendable". In addition, five items deleted, so the remaining 20 items were included in the draft scale.

Field Testing

Furthermore, to establish whether the concepts of the items on a scale based on the results of the feedback from experts could be understood by the adolescents, an instrument test was conducted. The pilot testing trial process was performed on 532 adolescents who were randomly selected from several cities in Indonesia spread across several islands, such as Java, Sumatra, Kalimantan and Sulawesi, to test whether the remaining 20 items on the scale could be understood correctly by the adolescents who were the target population. The items on the draft scale were read aloud to the participants and then they were asked questions to have an idea of what they understood about what they had heard. From this, all the adolescents stated that all the items were clear.

On the scale, five alternative Likert type responses were prepared as follows: "very appropriate", "appropriate", "doubtful", "not appropriate", and "very inappropriate" for each of the 20 items. Therefore, the form provided allowed each youth to respond to each item using one of the five response choices provided.

Data Analysis

The fairness character scale for adolescents was verified to identify the internal validation structure based on the evidence obtained. Evidence of content validity is used through testing and analysis by experts. In addition, to obtain evidence of the internal structure, field testing techniques, namely exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), were used to determine the structure of

the indicators and sub-indicator scales, together with a Cronbach's alpha test to find evidence for the reliability of the instrument (Besnoy et al., 2016). EFA was conducted using data obtained from 302 of the adolescents, while CFA was conducted using data obtained from 230 of the participants. In the test results, an item was said to be meaningful if it had a factor loading value above .3 (Osborne, 2014). In addition, to demonstrate the quality of the reliability scale, the Cronbach's alpha reliability coefficient analysis test involved criteria ranging between $< .4$ (bad), $.4 - .60$ (sufficient), $.60 - .75$ (good) and $> .75$ (very good) (Olaniyi, 2019). The structure of the items and factors obtained from the results of the EFA were then retested with CFA. The analysis process was conducted using AMOS 23.0.

Results

Scale development to measure the character of justice in adolescents. Creswell (2012) suggests that the interval scale provides a choice of responses to questions assuming each response choice has the same interval. The alternative answer choices were based on the Likert scale. Before use, the scale was tested for validity and reliability. The results show that none of the 20 scale items was lower than the total score ($< .30$), which shows that they are of good quality. Because each item on the scale has positive and negative statements, the item scores on the negative statements are reversed.

Exploration Factor Analysis

In evaluating the suitability of the data from the results of the distribution of the fairness character scale in adolescents, before EFA was conducted, the Kaiser-Meyer-Olkin (KMO) and Bartlett's roundness tests were first performed (see Table 2).

Furthermore, the results of the KMO test measurements were used to observe the feasibility of the sample to be factored. If the KMO value is greater than .5, ($p < .05$) it means that the sample is feasible for factor testing (Besnoy et al., 2016). The KMO test results obtained a value of .723 and the results of Bartlett's Test of Sphericity ($\chi^2 = 728.505$, $SD = 190$, $p = .000$) were found to be significant (Table 2). After the KMO test results were obtained, which showed that the data set was suitable for factor analysis, the factor analysis process was conducted using the component analysis method in order to reveal the factor structure (Tabachnick & Fidell, 1996). Scree plot graphs are also examined to determine the number of factors in the scale.

Figure 1 shows the change in the direction of the point after the fourth point (initially vertical, then horizontal). The Direct Oblimin oblique rotation method was then used for the data analysis. When it was suspected that there was a correlation between factors, a skewed rotation was used (Çokluk, 2010). Furthermore, the intersection point was taken with a loading value of .30, and with for each item contained in two different factors being a point of consideration, the difference in loading between the two values must be .10 or higher (Büyüköztürk & Çokluk-Bökeoğlu, 2008). All items on the scale were aggregated into four factors, with each factor consisting of five items.

Table 2

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
	Approx. Chi-Square	Df	Sig.
.723	728.505	190	.000

Figure 1

Scree Plot Graphs

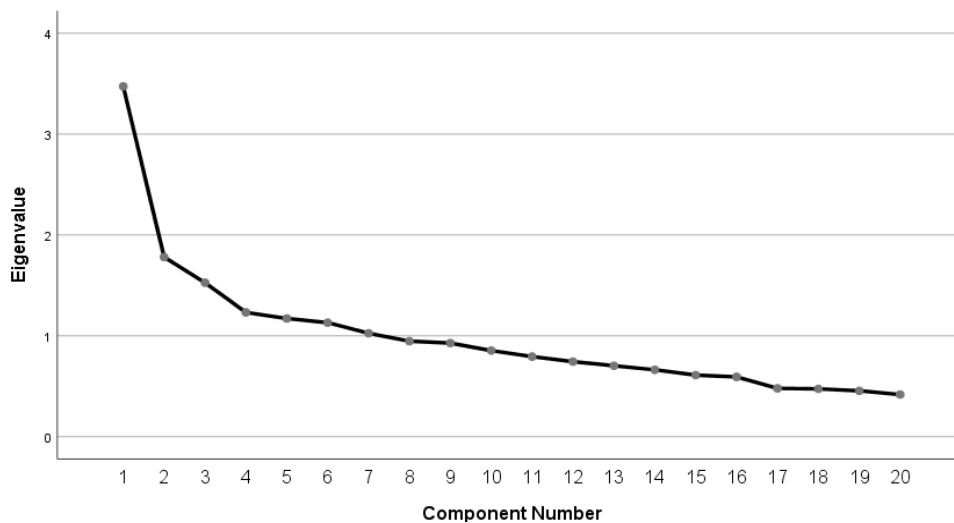


Table 3*Explanation of the Variance in the Factors in the Justice Character Scale*

Factor	Eigenvalue	Variance explained (Total)	Variance explained (Cumulative)
1	5.126	21.318	21.318
2	2.622	10.923	32.238
3	1.528	6.362	38.598
4	1.281	5.332	43.921

Table 4*Exploratory Factor Analysis for the Fairness Character Scale in Adolescents*

Item	Covariance	Factor 1	Factor 2	Factor 3	Factor 4
P1	.712	.651	-	-	-
P2	.723	.586	-	-	-
P3	.584	.781	-	-	-
P4	.645	.567	-	-	-
P5	.538	.671	-	-	-
M1	.647	-	.658	-	-
M2	.556	-	.745	-	-
M3	.612	-	.635	-	-
M4	.593	-	.726	-	-
M5	.486	-	.640	-	-
PS1	.490	-	-	.566	-
PS2	.502	-	-	.548	-
PS3	.741	-	-	.691	-
PS4	.787	-	-	.737	-
PS5	.732	-	-	.734	-
PT1	.626	-	-	-	.656
PT2	.858	-	-	-	.854
PT3	.820	-	-	-	.652
PT4	.568	-	-	-	.565
PT5	.744	-	-	-	.530

Table 3 shows the first factor's value of 21.318% of the total variance and the eigenvalue of 5.126. The second factor explains 10.923% of the total variance, and its eigenvalue is 2.622, while the corresponding figures for the third factor are 6.362% and 1.528. The fourth factor explains 1.281 of the total variances, which an eigenvalue of 5.332%. The total cumulative diversity of the original variables that the four

factors can explain is 43.922%. This indicates that the value of the cumulative factor explained is below the standard (<60%) (Tavşancıl & Keser, 2002). Büyüköztürk and Çokluk-Bökeoğlu (2008) explain that a good concept or construct can be seen from the high variance described. Table 3 shows the distribution of cross-factor items with their factor loads.

Table 4 shows that the item loading factors on various scales (.530 - .854), taking into account the number of samples, are 0.45 or higher, which are good values (Büyüköztürk & Çokluk-Bökeoğlu, 2008). The factor loading on the first factor varies between .567 and .781. The items in this factor relate to the behavior of adolescents related to not taking advantage of other people's weaknesses; therefore, this factor is referred to as the "exploitation factor". The value of the second factor ranges from .635 to .745. The items in this factor are related to individual behavior, to the value of individual equality, so the factor is referred to as the "appreciation factor". The factor loading value of the third factor varies from .548 to .737. The items in this factor are related to appropriate behavior according to social roles/regulations, hence the name "social role factors". Finally, the factor loading value of the fourth factor varies from .530 to .8854. These items are associated with transparent/open-minded behavior, and is referred to as the "open behavior factor".

A scale structure with four factors was created, it can be seen that five items in the first factor are related to "exploitation"; the five in the second factor to "appreciation"; five in the third factor to "social roles"; and five in the fourth factor to "open behavior".

Confirmatory Factor Analysis

After determining the constructs of the four factors and the 20 items obtained from the exploratory factor analysis results, a confirmatory factor analysis model was then used to construct and view latent factors in the scale structure and the dependent relationships between these factors using the AMOS program package 23.0. Confirmatory factor analysis was then conducted to establish the suitability of the values of Chi-square, GFI, RMSEA, CFI and AGFI. Values above ninety (>.90) are accepted (Kline, 2014). This means that the value included in the very good criterion must be >.95. While at the RMSEA value,

the acceptable value must be less than 0.08. This means that the value included in the very good criteria must be less than .05 (Byrne & Campbell, 1999; Hooper et al, 2008). The goodness-of-fit values obtained from the analysis are shown in Table 4.

The model can be accepted in line with very good criterion if the Chi-square value obtained and the comparison to the goodness-of-fit Chi-square value with degrees of freedom is 2. However, the value between 2 and 3 indicates an acceptable match (Besnoy et al, 2016). As can be seen in Table 5, this value is " $\chi^2/df = 1.645$ ". When the model fit value was checked, it could be seen that RMSEA= .065, NNFI= .915, CFI= .913, GFI= .939 and AGFI= .903

In the values displayed in Table 5, it can be concluded that the scale has an acceptable fit for the four factor constructs in the fairness character scale. Figure 2, shows a path diagram that displays the loading of the standard factor values for the four factor models.

Reliability Estimates

Internal consistency in the form of score reliability estimates was measured by the Cronbach's alpha value of the fairness character scale (Büyüköztürk & Çokluk-Bökeoğlu, 2008). The reliability value is a measure; if the consistency of item scores with the total test score. The value assessment criteria are that; if the coefficient value is between 0.70 and 0.80, it means that the scale is "good enough", and if the value is between 0.80 and 1.00, the scale is "very good" (Kline, 2014). The Cronbach's alpha internal consistency coefficient was calculated for the fairness character scale. The results can be seen in Table 6.

The Cronbach's alpha value was calculated for each factor, with the following results; .81 for exploitation factor; .79 for the appreciation factor; .75 for the social role factor; and .76 for the open

behavior factor. A value of .84 was obtained from the entire scale content, which shows that the scale has good reliability criteria and internal

consistency of each of the scale factors is also quite good.

Table 5

Confirmatory Factor Analysis of the Goodness-of-fit Values.

χ^2	χ^2 / df	CFI	TLI (NNFI)	GFI	AGFI	RMSEA
368.211	1.645	.913	.914	.939	.903	.065

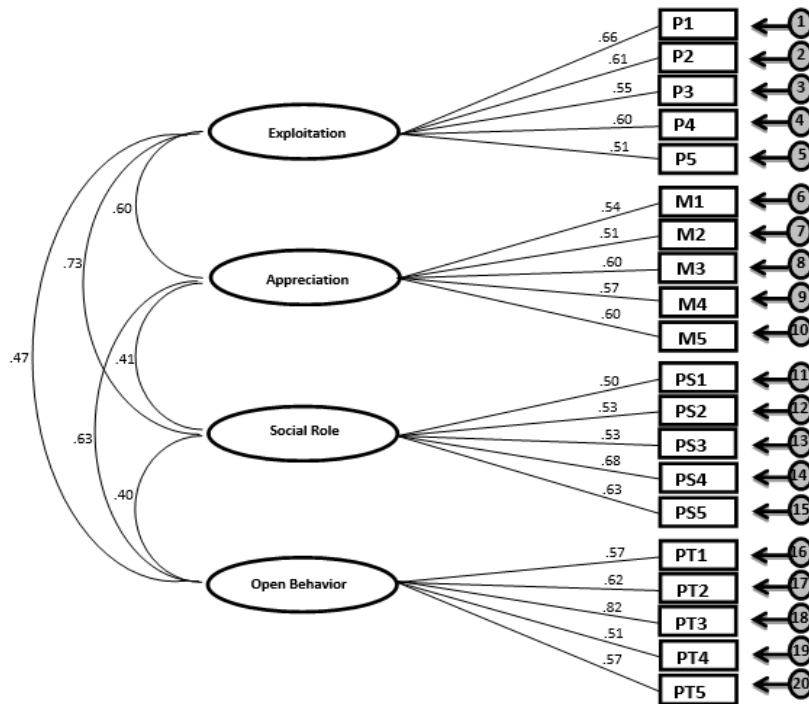
Table 6

Internal Consistency Reliability Coefficients of the Fairness Character Scale in Adolescents

Subdimension	Total Items	Internal consistency coefficient
Exploitation	5	.81
Appreciation	5	.79
Social Role	5	.75
Open Behavior	5	.76
Total Items	20	.84

Figure 2

Factor Analysis Findings Confirmatory the Justice Character Scales for Adolescents



Discussion

The literature review, the performance mechanisms of counselors in Indonesia, and the opinions of experts, together with the results of calculation of the EFA, CFA and Cronbach's alpha coefficients, showed four factors in the strength of the character of fairness in adolescents, namely; "exploitation", "appreciation", "social roles". and "open behavior". The overall value of the Cronbach's alpha reliability coefficient was .84, in the 'quite good' category. This value is sufficient to show that the scale can be used to measure the character of justice in adolescents, especially in Indonesia. Since the coefficient of consistency was found to vary between 0.75 and 0.84 for the four sub-dimensions of the fairness character scale for adolescents, this can be used as evidence of the validity of the scale. This evidence was confirmed by confirmatory factor analysis. The fit index of the model exceeds the value of .85 and the RMSA value for the model was is found to be .065 $p < .01$. Therefore, 20 items were developed representing the four sub-dimensions in the fairness character scale for adolescents in Indonesia as shown in Table 7.

The development of strength of character in adolescents is important; it provides them with capital to realize eudaemonia in their environment and well-being in themselves (Seligman, 2019). Therefore, the developers of positive psychology have attempted to understand the characteristics of character strength development in adolescents such as the strength of fairness. However, not all adolescents have the same characteristics in developing the strength of the character of justice. Therefore, a measurement tool is needed that can obtain accurate information about the development of the character of fairness in adolescents (Wang et al., 2021). Consequently, positive psychology developers will be able to provide services to adolescents to encourage the development of their character of

justice enabling them to avoid various problems that hinder eudaemonia and personal well-being.

Several studies that support the positive psychological theory of Seligman have been conducted. Experiments conducted by Sanaoui (1995) found that the development of the character of fairness in adolescents cannot take place solely by relying on one factor, but must involve all aspects of which are the adolescent's immediate environment. Yiğın (2013) found that the most widely used strategy in developing the character of justice was the involvement of approaches based on the cognitive aspects of adolescents, while the least used was one conducted with a multicultural approach.

Biçer and Polatcan (2015) found that strategies involving a social justice approach can be used as youth learning strategies to develop justice behavior in adolescents. They explain that this is because students would be given an understanding of fair behavior, which everyone could accept before they change their behavior. Saydam (2018) determined the frequency of justice behavior learning strategies found in a set of textbooks that were a source of teaching on political nationalism and were a reference for youth.

The results obtained in the studies above clearly complement the results of previous research conducted by Hilliard et al. (Hilliard et al., 2014), which explains the relationship between justice and violent behavior. The violent behavior that occurs in adolescents results from a lack of understanding and concern for the welfare or justice of others. Therefore, to reduce such acts of violence and injustice, it is necessary to increase the character of justice in the younger generation, in this case, teenagers. Therefore, to mitigate such violent behavior, it is necessary first to improve the character of justice (Mar'ati, 2014). Pala (2011) also made the same contention that the character of fairness is needed and fought for by

the younger generation through character education. This quality becomes significant capital for teenagers developing and becoming adults. It is sought for so that adolescents are able to meet

their personal needs, through methods and efforts that are justified by strong norms and ethics in society.

Table 7

Framework of the Fairness Character Scale

Sub-dimension	Item	Favorable	Unfavorable
Exploitation	- I trying to carry out responsibilities independently according to my abilities.	1	
	- Weaknesses that other people have, are not a reason for me to take advantage of them.	2	
	- I feel happy when I can take advantage of other people's weaknesses for my personal gain.		3
	- Taking advantage of other people's weaknesses under the pretext of taking turns by helping them with the strengths that I have (bartering) is legitimate.		4
	- Taking advantage of other people for personal gain is an act that is not commendable.	5	
Appreciation	- The uniqueness of other people, is sometimes a musing material for ridicule.		6
	- Everyone has their own differences and uniqueness that I must respect.	7	
	- I make friends with anyone regardless of ethnicity, race or another background.	8	
	- Being friends with someone who is very different to me is difficult.		9
	- People may have different understanding and perception during discussions, which I can understand.	10	
Social Role	- I am aware of my role as a student and youth in society.	11	
	- My status as a student and teenager influences my behavior to always obey the rules.	12	
	- The rules, regulations and norms in society make me feel depressed.		13
	- As a student and teenager, I have violated the rules or norms in society.		14
	- It has never occurred to me to violate school rules or norms in society.		15
Open Behavior	- I feel happy when other people provide me with input to enable me to do better.	16	
	- Criticism of me by others is something that doesn't need should be ignored because it's not important.		17
	- Differences of opinion during discussions is interesting for me.	18	
	- Understanding other people's way of thinking enables me to understand their character.	19	
	- We don't have to try to understand everyone, because that's an impossible thing to do.		20

The meaning of justice in the embodiment of the character of justice has previously been subject to a psychological review by Faturochman (Sulaiman et al., 2014). This embodiment often sees intervention from personal interests. Therefore, there is an assumption that a sense of justice will arise if the concept of it is personally beneficial, then creates justification for similar violent or unfair behavior towards other children at school. In several studies, violent behavior is considered adaptive behavior because it is a survival mechanism that individuals implement to ensure their existence, maintain their self-esteem, and strengthen themselves (Montagna et al., 2010; Padilla et al., 2016; Randa et al., 2019). Consequently, in realizing the character of justice, understanding its assessment is a foundation that must first be built as a provision for adolescents so that unfair behavior does not reappear.

In Indonesia, research has been conducted to improve the character of justice (Suparwi, 2014). However, its application still has some limitations, including the rationalization of research subjects in developing the character of justice within themselves. It is in line with what was found by Siengsukon et al. (2020) that one of the problems, according to cognitive-oriented counseling theory, is caused by disturbances in the cognitive system in the form of cognitive distortions or disorders.

In the study of positive psychology, developers have also attempted to examine several factors that can influence the development of character strengths. Seligman (Seligman, 2019) explains that based on experience, several conditions can shape the strength of character, including opportunities to study and work; a supportive and consistent family; a comfortable neighborhood and school; political stability, and democracy; together with the emergence of mentors, role models, supportive peers, and families, who play a direct role both inside and outside the home.

It has been explained that these important recurring factors can shape character strength and become interesting issues to study. The factors include positive parenting, positive role models, and close relationships with family and peers (Lopez et al., 2018). Such factors are interesting because, within the scope of psychosocial development and environmental psychology, individuals growing and developing into teenagers cannot be separated from the role of three significant others, namely parents, peers and teachers (Seligman, 2019). In the home environment, adolescents often interact with their parents, while outside it, such as at school, they interact with their peers and teachers.

Therefore, the results of the development of this scale can complement the measurement tool that was previously developed by Ruch et al. (2010), namely the Values In Action Inventory of Strength (VIA-IS). A strength of the character fairness scale is that it has been developed by involving various youth participants from several major islands in Indonesia. Therefore, the scale has been adjusted to the strength of the character of fairness in adolescents in Indonesia. However, the factor analysis conducted in the development of the scale has a cumulative factor value below standard (<60%). Therefore, future researchers should retest this with more diverse and a greater number of participants.

Conclusion

The fairness character scale for teenagers consists of four factors, namely "exploitation", "appreciation", "social role" and "open behavior". The validity test results show that each item's value is not lower than the total score (< .30), so they are of good quality. The Cronbach's alpha internal consistency value was calculated to be .84. After completing all stages of the scale development, 20 items were obtained for it. The scale can be used by positive psychology

developers who focus on adolescents to measure and identify the development of the strength of the character of fairness in adolescents in Indonesia. The scale will also complement the character strength measurement tools previously developed.[]

Author Contribution Statement

Ashari Mahfud: Conceptualization; Data Curation; Formal Analysis; Investigation; Methodology; Writing Original Draft. **Mungin Eddy Wibowo:** Conceptualization; Funding Acquisition; Project Administration; Validation; Visualization. **Mulawarman Mulawarman:** Data Curation; Funding Acquisition; Methodology; Resources; Validation; Visualization; Writing, Review & Editing. **Muhammad Japar:** Funding Acquisition; Project Administration; Resources; Visualization; Writing Original Draft.

References

- Besnoy, K. D., Dantzer, J., Besnoy, L. R., & Byrne, C. (2016). Using exploratory and confirmatory factor analysis to measure construct validity of the Traits, Aptitudes, and Behaviors Scale (TABS). *Journal for the Education of the Gifted*, 39(1), 3–22. <https://doi.org/10.1177/0162353215624160>
- Bhatt, K. (2020). Measuring service fairness and its impact on service quality and satisfaction: A study of Indian banking services. *Journal of Financial Services Marketing*, 25(1–2), 35–44. <https://doi.org/10.1057/s41264-020-00069-7>
- Biçer, N., & Polatcan, F. (2015). Evaluation of vocabulary learning strategies in teaching Turkish as a foreign language. *Atatürk University Journal of Turkish Researches Institute*, 54(1), 811–828.
- Book, A. S., Volk, A. A., & Hosker, A. (2012). Adolescent bullying and personality: An adaptive approach. *Personality and Individual Differences*, 52(2), 218–223. <https://doi.org/10.1016/j.paid.2011.10.028>
- Borba, M. (2001). *The step by step for building moral intelegenci: The seven essential virtue of moral intelegence*. Micheleborba.
- Borba, M. (2008). *Membangun kecerdasan moral*. Gramedia Pustaka Utama.
- Büyüköztürk, Ş., & Çokluk-Bökeoğlu, Ö. (2008). Discriminant function analysis: Concept and application. *Eurasian Journal of Educational Research (EJER)*, 8(33), 73–92.
- Byrne, B. M., & Campbell, T. L. (1999). Cross-cultural comparisons and the presumption of equivalent measurement and theoretical structure. *Journal of Cross-Cultural Psychology*, 30(5), 555–574. <https://doi.org/10.1177/0022022199030005001>
- Camerer, C. F. (2003). Behavioural studies of strategic thinking in games. *Trends in Cognitive Sciences*, 7(5), 225–231. [https://doi.org/10.1016/S1364-6613\(03\)00094-9](https://doi.org/10.1016/S1364-6613(03)00094-9)
- Chung, J. Y., & Petrick, J. F. (2015). Measuring price fairness: Development of a multidimensional scale. *Journal of Travel & Tourism Marketing*, 32(7), 907–922. <https://doi.org/10.1080/10548408.2015.1063894>
- Çokluk, Ş. G. B. Ş. (2010). *Sosyal bilimler için çok değişkenli istatistik spss ve lirsal uygulamalar*. PegemA.

- Coyne, I., Gopaul, A.-M., Campbell, M., Pankász, A., Garland, R., & Cousans, F. (2019). Bystander responses to bullying at work: The role of mode, type and relationship to target. *Journal of Business Ethics*, 157(3), 813–827. <https://doi.org/10.1007/s10551-017-3692-2>
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Pearson Addison-Wesley.
- Devlin, J. F., Kumar Roy, S., & Sekhon, H. (2014). Perceptions of fair treatment in financial services. *European Journal of Marketing*, 48(7/8), 1315–1332. <https://doi.org/10.1108/EJM-08-2012-0469>
- Hilliard, L. J., Bowers, E. P., Greenman, K. N., Hershberg, R. M., Geldhof, G. J., Glickman, S. A., Lerner, J. V., & Lerner, R. M. (2014). Beyond the deficit model: Bullying and trajectories of character virtues in adolescence. *Journal of Youth and Adolescence*, 43(6), 991–1003. <https://doi.org/10.1007/s10964-014-0094-y>
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Evaluating model fit: a synthesis of the structural equation modelling literature. *7th European Conference on Research Methodology for Business and Management Studies*, 195–200. <https://doi.org/10.21427/D79B73>
- Josephson, M. (2006). *Making ethical decisions: The six pillars of character*. Josephson Institute.
- Kline, P. (2014). *The new psychometrics: Science, psychology and measurement*. Routledge.
- Krisnana, I., Rachmawati, P. D., Arief, Y. S., Kurnia, I. D., Nastiti, A. A., Safitri, I. F. N., & Putri, A. T. K. (2021). Adolescent characteristics and parenting style as the determinant factors of bullying in Indonesia: A cross-sectional study. *International Journal of Adolescent Medicine and Health*, 33(5). <https://doi.org/10.1515/ijamh-2019-0019>
- Kustanti, E. R. (2015). Gambaran bullying pada pelajar di Kota Semarang. *Jurnal Psikologi Undip*, 14(1), 29–39. <https://doi.org/10.14710/jpu.14.1.29-39>
- Kwak, H., Puzakova, M., & Rocereto, J. F. (2017). When brand anthropomorphism alters perceptions of justice: The moderating role of self-construal. *International Journal of Research in Marketing*, 34(4), 851–871. <https://doi.org/10.1016/j.ijresmar.2017.04.002>
- Lestari, M. D. (2006). *Adaptasi alat ukur values in action inventory strengths pada perawat di Rumah Sakit Cengkareng* [Master bachelors thesis]. Universitas Indonesia.
- Lopez, S. J., Pedrotti, J. T., & Snyder, C. R. (2018). *Positive psychology: The scientific and practical explorations of human strengths*. Sage publications.
- Macleod, C. M. (2014). Applying justice as fairness to institutions. In *A companion to Rawls* (pp. 164–184). John Wiley & Sons, Inc. <https://doi.org/10.1002/9781118328460.ch9>
- Mar'ati, R. (2014). Pesantren sebagai basis pendidikan karakter: Tinjauan psikologis. *Al-Murabbi: Jurnal Studi Kependidikan dan Keislaman*, 1(1), 1–15.
- Memiş, M. (2018). *Impact of derivational morpheme teaching on vocabulary, lexicalization skill and reading comprehension competence of the students learning Turkish as foreign language* [Unpublished doctoral thesis]. Gazi University Graduate School of Educational Sciences.
- Montagna, P., Pierangeli, G., & Cortelli, P. (2010). The primary headaches as a reflection of genetic Darwinian adaptive behavioral responses. *Headache: The Journal of Head and Face Pain*, 50(2), 273–289. <https://doi.org/10.1111/j.1526-4610.2009.01584.x>
- Olaniyi, A. A. (2019). Application of Likert scale's type and Cronbach's alpha analysis in an airport perception study. *Scholar Journal of Applied Sciences and Research*, 2(4), 1–5.
- Osborne, J. W. (2014). *Best practices in exploratory factor analysis*. CreateSpace Independent Publishing.

- Padilla, S. L., Qiu, J., Soden, M. E., Sanz, E., Nestor, C. C., Barker, F. D., Quintana, A., Zweifel, L. S., Rønnekleiv, O. K., Kelly, M. J., & Palmiter, R. D. (2016). Agouti-related peptide neural circuits mediate adaptive behaviors in the starved state. *Nature Neuroscience*, *19*(5), 734–741. <https://doi.org/10.1038/nn.4274>
- Pala, A. (2011). The need for character education. *International Journal of Social Sciences and Humanity Studies*, *3*(2), 23–32.
- Park, N., & Peterson, C. (2008). Positive Psychology and character strengths: Application to strengths-based school counseling. *Professional School Counseling*, *12*(2), 2156759X0801200. <https://doi.org/10.1177/2156759X0801200214>
- Park, N., & Peterson, C. (2009). Character strengths: Research and practice. *Journal of College and Character*, *10*(4). <https://doi.org/10.2202/1940-1639.1042>
- Randa, R., Reynolds, B. W., & Nobles, M. R. (2019). Measuring the effects of limited and persistent school bullying victimization: Repeat victimization, fear, and adaptive behaviors. *Journal of Interpersonal Violence*, *34*(2), 392–415. <https://doi.org/10.1177/0886260516641279>
- Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2006). Peer interactions, relationships, and groups. In *Handbook of child psychology: Social, emotional, and personality development* (pp. 571–645). John Wiley & Sons, Inc.
- Rubini, B., Permanasari, A., & Permana, I. (2018). Building character through science learning with scientific literacy based. *IOP Conference Series: Materials Science and Engineering*, *288*, 012030. <https://doi.org/10.1088/1757-899X/288/1/012030>
- Ruch, W., Proyer, R. T., Harzer, C., Park, N., Peterson, C., & Seligman, M. E. P. (2010). Values in Action Inventory of Strengths (VIA-IS). *Journal of Individual Differences*, *31*(3), 138–149. <https://doi.org/10.1027/1614-0001/a000022>
- Sanaoui, R. (1995). Adult learners' approaches to learning vocabulary in second languages. *The Modern Language Journal*, *79*(1), 15–28. <https://doi.org/10.1111/j.1540-4781.1995.tb05410.x>
- Saydam, M. (2018). *Research on Turkish teaching course books as a foreign language in terms of word teaching strategies* [Unpublished master thesis]. Yıldız Technical University Graduate School of Social Sciences, Istanbul.
- Scaini, S., & Caputi, M. (2018). The interaction between psychopathological symptoms and conflictual parent-child relationship in predicting social skills and coping strategies. *International Journal of Emotional Education*, *10*(2), 159–162.
- Seligman, M. E. P. (2019). Positive Psychology: A personal history. *Annual Review of Clinical Psychology*, *15*(1), 1–23. <https://doi.org/10.1146/annurev-clinpsy-050718-095653>
- Setyaputri, N. Y., Krisphianti, Y. D., & Puspitarini, I. Y. D. (2018). Permainan roda pelangi sebagai media untuk meningkatkan karakter fairness siswa sekolah dasar. *Jurnal Kajian Bimbingan Dan Konseling*, *3*(3), 108–118. <https://doi.org/10.17977/um001v3i32018p108>
- Siengsukon, C. F., Nelson, E., Williams-Cooke, C., Ludwig, R., Beck, E. S., Vidoni, E. D., Mahnken, J. D., Stevens, S., Drerup, M., Bruce, J., & Burns, J. M. (2020). Cognitive behavioral therapy for insomnia to enhance cognitive function and reduce the rate of Aβ deposition in older adults with symptoms of insomnia: A single-site randomized pilot clinical trial protocol. *Contemporary Clinical Trials*, *99*, 106190. <https://doi.org/10.1016/j.cct.2020.106190>
- Sivo, S., Shannon, K., Fox, J., Taub, G., & Robinson, E. (2017). Structural analysis of character education: A cross-cultural investigation. *School Psychology Forum*, *11*(2), 34–44.
- Soetoprawiro, K. (2010). Keadilan sebagai keadilan. *Jurnal Hukum Pro Justitia*, *28*(2), 229–256.

- Sulaiman, S., Abdullah, M. A., Mansur, T. M., & Zulfan, Z. (2014). Pembangunan hukum perlindungan nelayan tradisional di Aceh dalam kaitan pemanfaatan sumber daya perikanan secara berkeadilan. *Jurnal Media Hukum*, 21(2), 309–321. <https://doi.org/10.18196/jmh.v21i2.1195>
- Suparwi, S. (2014). Perilaku bullying siswa ditinjau dari persepsi pola asuh otoriter dan kemampuan berempati. *Inferensi: Jurnal Penelitian Sosial Keagamaan*, 8(1), 159–179. <https://doi.org/10.18326/infl3.v8i1.159-179>
- Tabachnick, B., & Fidell, L. (1996). *Using multivariate statistics*. Harpercollins College Publishers.
- Tavşancıl, E., & Keser, H. (2002). İnternete yönelik likert tipi bir tutum ölçeğinin geliştirilmesi. *Eğitim Bilimleri ve Uygulama*, 1(1), 79–100.
- The Indonesian Child Protection Commission. (2022, August 24). *Data kasus perlindungan anak 2021*. Bank Data Perlindungan Anak. <https://bankdata.kpai.go.id/tabulasi-data/data-kasus-perlindungan-anak-2021>
- The National Consortium for Character Development. (2020). *Verbal bullying untuk dapatkan popularitas*.
- Ting, S.-C. (2013). Service Fairness Scale: Development, validation, and structure. *International Journal of Marketing Studies*, 5(6), 25. <https://doi.org/10.5539/ijms.v5n6p25>
- van Dijk, E., & Vermunt, R. (2000). Strategy and fairness in social decision making: Sometimes it pays to be powerless. *Journal of Experimental Social Psychology*, 36(1), 1–25. <https://doi.org/10.1006/jesp.1999.1392>
- Wang, Y., Derakhshan, A., & Zhang, L. J. (2021). Researching and practicing positive psychology in second/foreign language learning and teaching: The past, current status and future directions. *Frontiers in Psychology*, 12, 731721. <https://doi.org/10.3389/fpsyg.2021.731721>
- Yang, C., Sharkey, J. D., Chen, C., & Jimerson, S. (2019). Teacher-home communication and bullying victimization: Do parents' perceptions of fairness of rules matter? *School Psychology Review*, 48(3), 251–266. <https://doi.org/10.17105/SPR-2018-0060.V48-3>
- Yığın, M. (2013). *Vocabulary learning strategies the learners use in teaching Turkish as a second language* [Unpublished master thesis]. Çanakkale On Sekiz Mart University.