Research Article

Analysis of indicators of juvenile delinquency behavior teenagers

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Article Info	Abstract
 	Juvenile delinquency is an interesting phenomenon to study. The characteristics of the social environment contribute to differences in behaviour of the juvenile delinquency in one and another area. This difference causes ambiguity in the conceptualization of delinquent behaviour, especially in its measurement. This Study uses a quantitative approach model. The research by adapting the theory from Dirdjosisworo, then arranged into eight forms of juvenile delinquent behaviour. This Research aims to determine the behavors carried out by teenagers that are related to deliquency. Confirmatory Factor Analysis' first order towards eight indicators of juvenile delinquency with the unidimensional construct.In a continuation, this research tries to recalculate the data which involves measuring delinquent behaviour towards 300 teenagers in Bekasi City. The results of the analysis indicates the are eight form of Juvenile deliquent predicted the behavior such as stealing, taking something by force, being involved in crime, racing, having a brazen attitude, being under no supervision, being comfortable hanging out with friends, and leaving learning activities.

To cite this article

Introduction

Juvenile delinquency is represented through behaviour that violates the applicable rules in certain places (Doelman et al., 2021). The whole behaviour referred to is then commonly known as delinquent behaviour. Rufiatun (2021) explains crimes and violations committed by teenagers who are a maximum of 18 years old. According to the explanation of Kratcoski et al., (2019), juvenile delinquency is interpreted as unlawful behaviour, and juveniles are perpetrators concerned with certain age limits. Therefore, the high and low levels of juvenile delinquency need to refer to actions included in unlawful behaviour.

One of the focuses of delinquent behaviour studies is to disclose delinquency in an objectively measurable way. All forms of congruent behaviour are collected to find out forms of juvenile delinquency. There are obstacles to obtaining general forms that represent delinquent behaviour, one of which is the socio-cultural conditions of the environment where juveniles live and socialise (Trinidad et al., 2019). Inaccuracy in exploring the form of delinquent behaviour often presents a generalisation about delinquent teenagers, or vice versa, a generalisation of good teenagers. By focusing on one area, measurements tend to ignore the sociocultural characteristics of youth in other areas (Martin et al., 2020). Indicators that represent the condition of juveniles in their social ecosystem are needed. Azwar (2016) describes that quantitative researchers can develop their data collection questionnaires by adjusting them to the needs and conditions faced by researchers.

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The theory described by Dirdjosisworo with a criminological approach reveals that there are three forms of delinquent behaviour: committing crimes, deviating from social norms, and experiencing being ignored by parents (Hutahaean et al., 2020). The theoretical description has not been accompanied by quantitatively measurable empirical facts, because it is explained based on a conceptual approach to legal science. Another theory explains that juvenile delinquency is measured through the ability of juveniles to exercise self-control. Self-control was found to have to do with delinquent behaviour in the form of violent crimes and fraud (Manzoni & Schwarzenegger, 2019). This was then further studied by Weng & Chui (2018) to find the delinquency components like theft and any act of violence correlated with low self-control. Previous research from Hutahaean et al., (2020) noted eight forms of juvenile delinquent behaviour, including stealing, force-taking, speeding on motorbikes, having a brazen attitude, having no parental supervision, spending time with friends for hanging out, and hanging out with playmates. The measurement employs the reporting of juvenile respondents involved in eight forms of delinquent behaviour (Hutahaean et al., 2019). The reliability of measurement relies on the strong correlation and consistency of one-time measuring instrument presentation. Research by Li et al (2023) conducted the are negative relations between parental control and delinquency. The results underscore the need to consider cultural differences when assessing the impact of parenting practices on delinquency, or when applying the research findings to delinquency prevention programs.

Adolescence is a phase that demands for more independence and detachment from the parental household, while the social influence of peers increases. Consequently, a widely discussed predictor of adolescents' deviant behavior is peer influence Research by Farrell et al (2017) One of the most consistent findings is the close association between having deviant friends and adolescents' own deviant behavior (Dullas et al., 2021)(Thompson et al., 2020).

A statistical approach to the measurement of an attribute can be implemented through a more comprehensive technique to see the reliability of the measurement of the research variables. Confirmatory Factor Analysis (CFA) is intended to test ways of variables measured in describing the number of a factor (Brown, 2015). CFA testing follows the variable dimension characters. It's the first order if using the unidimensional and second order, it is orthogonal. The CFA's outputs help determine dominant indicators in setting the measurement construct. The CFA analysis technique can help researchers determine the strength of items of measurement tools in their questionnaire more specifically. For example, the rotational measurement items, allow us to see the roles of all items in helping bring out score variances in research respondents. Through this study, the indicators of juvenile delinquency will show their strength in measuring the attributes. The eight indicators involved are based on the concept of juvenile delinquency adequately representing the characteristics of youths in Bekasi City. There are various types of research conducted on the issue of juvenile delinquency. In this research, we will try to examine an analysis model of the consequences of juvenile delinquent behavior. What effects do teenagers often have on their delinquent behavior? It will be important to know that not all aspects of juvenile delinquency behavior as shown by Dirjosisworo contribute to the construct of juvenile delinquency.

Method

Research model

This study conducted a confirmatory analysis of measurement items. Carried out with a systematic approach to test hypotheses about how the measurement items that have beenarranged previously correspond to the data obtained. This approach is used to test the extent to which the measurement indicators that have been proposed are in accordance with the facts of the condition of juvenile delinquency in Bekasi City, and also to obtain the measurement construct.

Participant

As many as 300 young persons living in Bekasi City, at age 12 to <18 years were involved in filling out the questionnaire on Juvenile Delinquency Scales. Respondents were selected based on their willingness to fill out the

research scales. The research scale was prepared by adapting the theory from Dirdjosisworo, then arranged into eight forms of juvenile delinquent behaviour, namely stealing, taking something by force, being involved in crime, racing, having a brazen attitude, being under no supervision, being comfortable hanging out with friends, and leaving learning activities.

Data Collection tools

The measurement items are arranged in two different poles (contrary to each other), with score variation intervals from 1 to 5. The reliability of the measuring instrument is calculated using analysis of Cronbach's alpha and omega McDonald's coefficients, and Confirmatory Factor Analysis′ first order towards eight indicators of juvenile delinquency with the unidimensional construct.

Ethic

Respondents involved in filling out the instrument are participants who have given consent to be willing to fill out the questionnaire, and identities that reflect the respondents′ personal lives are not part of the analysis. The data analyzed are limited to the scope of delinquency measurements that refer to the theory.

Results

The consistency test was carried out on eight (8) measurement items. All items describe the dichotomy of delinquent behaviour which is measured in five (5) score variations. The higher the score is, the higher level of delinquent behaviour is measured on each item. Conversely, the lower the score is, the lower the level of delinquent behaviour is measured on each item. For example, in the first item, if the delinquent behaviour score 5 is represented by stealing. This applies to all items.

Table 1. Items for Estimation of Alpha Reliability

Item	Consistency Coefficient	
	McDonald's ω	Cronbach's α
Give - Steal	0,677	0,664
Ask – Taking sth by force	0,680	0,673
No - Criminal	0,659	0,670
No – Race	0,644	0,661
Polite – Brazen	0,675	0,669
Supervision – No	0,661	0,673
Home – Hangout Place	0,649	0,662
Learning – Hanging Out	0,636	0,654
Point estimate Cronbach's α = 0,695		

Point estimation in statistics shows an alpha value of 0.695. The estimate indicates the highest consistency limit that should be obtained from the measurement. Thus, all items that exceed the point estimates need to be dropped from the measurement items. The alpha estimation table presents that all items used to measure delinquent behaviour are worth maintaining. Not only because the size of the point estimate has been met, but also because the alpha consistency value is within acceptable limits (0.6 – 07). According to Ursachi et al., (2015), the value of reliability indicates that some items are reliable and some others tend to be weak. This means that the average efficiency is at 0.65, so there are 0.35 items not as strong as the other items.

Furthermore, the eight retained items were analysed by paying attention to their level of uniqueness. This aims to find out the number of solutions for measuring delinquent behaviour before estimating and revealing an effective measurement model for delinquent behaviour. Unique dominance of measurement items can be determined by estimation, through the loading item mechanism. This refers to the point estimation of consistency. The uniqueness of all items indicates different variations and dominance. In general, there are four items with the dominance of

uniqueness. No-Racing, No Supervision, being Comfortable at Home-Place for Hanging Out, and Learning-Hanging Out.

Table 2. Item Loadings

	RC1	Uniquenes
Give – Steal		0,394
Aske – Taking sth by force		0,419
No – Criminal		0,355
No – Race	0,749	**0,698**
Polite – Brazen		0,388
Supervision – No	0,534	**0,656**
Home – Hangout Place	0,746	**0,633**
Learning – Hanging Out	0,865	**0,612**

Note. Applied rotation method is promax

The four items with a dominance of dominating uniqueness, have a uniqueness value>0.6, in other words, having met the estimation limit for item consistency in measuring delinquent behaviour. The other four items show uniqueness <0.6. This can be seen in the items Give-Steal, Ask-Taking sth by force, No-Criminal, and Polite-Brazen, indicating that low uniqueness has not been able to play a maximum role in helping to create variations in measurement through 8 items. But this does not mean that the items are not correlated with other items. In this case, there is statistical significance but in a weak relationship.
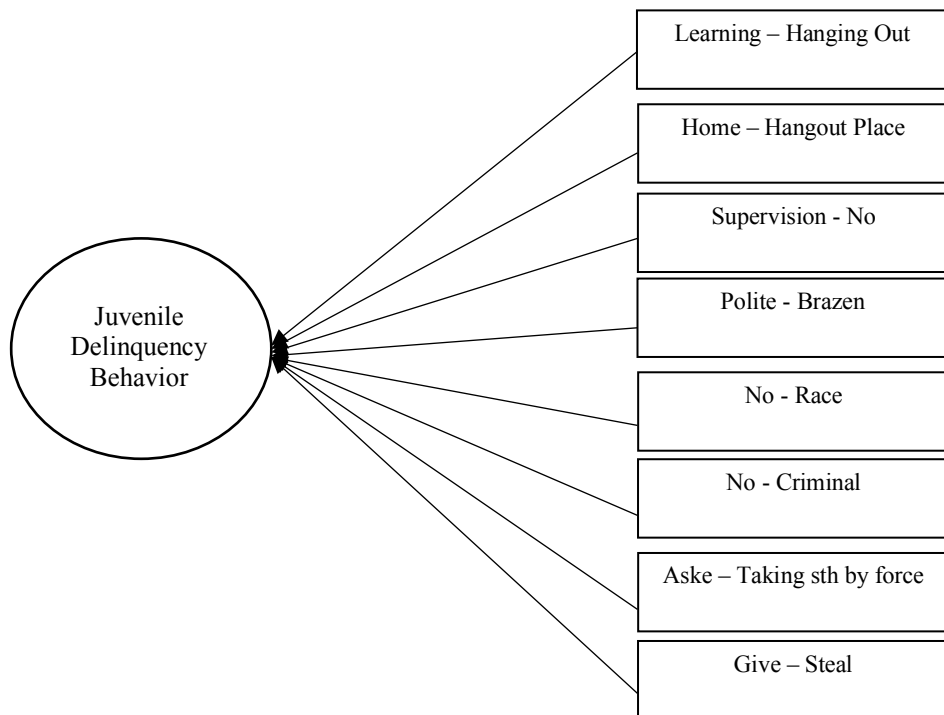

Figure 1. Juvenile Delinquency Behavior model

The strength of each item in uncovering delinquent behaviour is clearly unique, and all of them can be said to have sufficient reliability in measuring capacity. The measurement path has managed to show the dominance of the ability to measure. It is marked with a thick factor line for strong dominance and a fine thin line for low dominance. The thick factor line also shows the effect of reliability. Thus, of the four dominant items, it turns out that one has a decreasing measurement effect. It happens on the items Supervision-No. But the items No-Racing, Home-Hangout Place, and Learning-Hangout have a measurement effect that tends to increase.

Table 3. Chi Square test Statistic (unscaled)

	df	AICBIC	X²	p
Model	20,000		39,247	0,006
0<X2<2df	(fit)			

Behaviours, like racing, spending a lot of time with friends to hang out, and absence of parental supervision, are more dominating in the measurement. These four behaviours are more representative to serve as forms of juvenile delinquency. Further in-depth studies are required to conclude that the four others can represent juvenile delinquency. The path diagram described has met the threshold of testing the measurement model. The Chi Square test managed to get $0<X^2<2df$. The existing measurement model is considered feasible to be used in measuring delinquent behaviour..
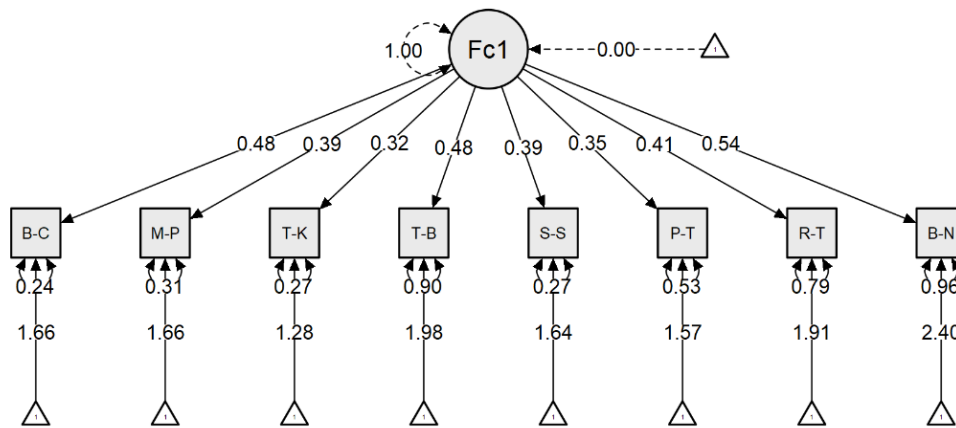

Figure 1. SEM model for Juvenile Delinquency Behavior

The feasibility of measurement is then also seen again based on several parameters. Among them are root mean square, standardised root mean, and goodness of fit. The Root Mean Square Error of Approximation (RMSEA) is seen to have successfully met the parameters in the acceptable model class. The size parameter based on Standardised Root Mean Square Residual (SRMR) meets the benchmark with the model class said to be fit. Furthermore, the Goodness of Fit Index (GFI) measurement also meets the parameters and the measurement model can be declared fit.

Table 4. Other fit measures

Metric	Value
Root mean square error of approximation (RMSEA)	**0,067**
RMSEA 90% CI lower bound	0,042
RMSEA 90% CI upper bound	0,092
RMSEA p-value	0,125
Standardised root mean square residual (SRMR)	**0,097**
Hoelter's critical N (α = .05)	202,389
Hoelter's critical N (α = .01)	241,857
Goodness of fit index (GFI)	**0,995**
McDonald fit index (MFI)	0,956
Expected cross validation index (ECVI)	0,317
0.05<RMSEA<0.08 (dapat diterima)	
0.05<SRMR (fit)	
0.95<GFI<1.00 (fit)	

The measurement design with eight forms of delinquent behaviour shows that those existing eight forms are still qualified enough to be used as the construct of a juvenile delinquency scale questionnaire. The eight items used are eligible to obtain quantitative data regarding juvenile delinquent behaviour. Four forms of delinquent behaviour are

found with a tendency to have the power over the measurement of delinquent behaviour of research respondents. This power represents the forms of delinquent behaviour mostly carried out by respondents, and at the same time, also represents the pattern of juvenile delinquent behaviour in Bekasi City, while the other four tend to be infrequent.

Discussion and Conclusion

Psychological modeling has been mostly dominated by models aiming at explaining behaviors (Stupnisky et al., 2018) and only recently, more emphasis has been placed on prediction and rigorous model validation (Yarkoni & Westfall, 2017). Accurate predictions, however, might help to understand and to potentially prevent the onset and increase of deviant and criminal behavior. To obtain a complete picture of the risk and protective factors of deviant behavior, it is important to include a multitude of variables in the model rather than limiting the set to a few out of theoretical considerations. Based on the point estimation of the measurement consistency, the eight items analysed have a lower reliability coefficient value than their point estimates. The eight items analysed are considered quite consistent in measuring delinquent behaviour. These items, including racing, lack of supervision, and being comfortable with friends hanging out and leaving learning activities, can describe the uniqueness of delinquent behaviour in juveniles who live in the Bekasi City area. But the other delinquent behaviours, including stealing, taking something by force, being involved in crime, and having a brazen attitude, tend to represent delinquent behaviour in general.

Juvenile delinquency is a problem that can occur in various cities including Bekasi City. In general, teenagers are involved in delinquency at school. For example, by committing disciplinary violations at school. Lazy to do learning and tend to choose to skip school. Hanging out or nongkrong is social activity outside of formal routine habits done outside the home and school environment (Wuryaningrat et al., 2021). Hanging out includes meeting with friends and doing activities as freely as possible. Hanging out is continuous with social patterns directed at the hangout group (Ito, 2013). Similar interests and intimate relationships emerge between one another. Hanging out is a place considered the most comfortable. It then becomes the best choice for running away or getting out of the home and school environment (Walmsley, 2018). Teenagers are looking for situations that make it easier for them, particularly without parental and school supervision (Schepers, 2017). Teenagers want freedom and no supervision of certain activities that they want to do with their hangout friends.

In the context of juvenile criminal law, there are also those involved in juvenile delinquence or delinquency in the form of theft or robbery. Theft and robbery are crimes that can occur in various places, including in Bekasi City or anywhere else in the world. These crimes can involve people of various age groups, including teenagers. Teenagers tend to be easily influenced by their peers. If peers are involved in a crime, the teen may be more inclined to participate. There is another form that is still in the same direction as theft, namely asking forcibly (counterfeiting). Asking forcibly is the act of threatening or forcing another person to give something, usually money or goods, in an unauthorized or unlawful way.

Juveniles are involved in cases of forcible solicitation or coercion for a variety of complex reasons. This is done not only to fulfill the sensational search for identity, but also to fulfill a certain economy. For example, economics for friendship costs are negative. Adolescents are still in the stage of emotional and social development. They may not yet have enough skills to manage their emotions and frustrations in a healthy way. This can cause them to look for the wrong ways to cope with their pressure or dissatisfaction; a lack of supervision or guidance from parents or guardians can make teens more vulnerable to behavioral problems. They may not have the support they need to develop the correct values and skills.

Motorcycle speeding is a serious problem that must be seriously addressed by all parties involved. The majority of young riders are not old enough to get a driving licence, and their emotional immaturity leads them to fulfil their curiosity about freedom. Teenagers explore the sensations of challenging driving by running vehicles at high speeds (Romer et al., 2014). They drive very fast and do it recklessly, ignoring the rules and ignoring the risk of traffic

accidents (Zainafree et al., 2021). Speeding on a motorcycle usually violates traffic rules, such as exceeding the speed limit, violating red lights, and so on. This can result in young riders getting into legal trouble. Teenagers involved in motorcycle speeding can be influenced by a variety of complex factors. Teenagers often seek new experiences and thrills. Riding a motorcycle at high speed can give a strong sensation and make them feel alive. Some teenagers consider that owning a motorcycle and riding it at high speeds is a way to gain a sense of pride and prestige among their friends. Adolescents who lack parental supervision tend to be freer in making decisions about riding motorcycles at high speeds.

Recommendations

Of course, typical delinquent behaviour in other areas differs from the one in Bekasi City. It also highly depends on the pattern of the daily behaviour of adolescents, including the available infrastructure. It is suggested that research with different regional characteristics from Bekasi City to study the unique patterns of adolescent behaviour according to their characteristics.

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