



Enhancing Youth Risk Assessment: A Structured Tool for Understanding the Continuum of Delinquency and Social Deviation

Yaakov Reuven¹ and Hagit Turjeman²

¹Western Galilee college

²Western Galilee college

Corresponding author E-mail: : Reuvenya@walla.co.il

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Abstract: Risky behavior falls along the continuum of delinquency and social deviation and is common among adolescents. It can significantly influence the development of their social identity in adulthood. This paper introduces an actuarial tool for objective risk assessment of delinquency and social deviance in adolescents and families. It has two main categories: protective factors (personal, interpersonal, family, and community layers) and risk factors (violence, substance abuse, delinquency, victimization, risky sexual behavior, self-harm, dropout), considering peer and family influences. Validation involved professional input, testing with at-risk frameworks, statistical validity and reliability analysis, and experts resolving criteria issues. This proposed tool holds significant importance in precisely mapping the risk factors and resilience of adolescents in the context of delinquency and social deviation. It facilitates the development of personalized and tailored treatment plans.

Keywords: Risk assessment, Risk factors, Protective factors, Juvenile delinquency, Youth resilience, Youth at risk

Scientific Background

The issue of at-risk youth in modern society is a global concern, particularly when it's associated with juvenile delinquency or criminal behavior (Siegel & Welsh, 2020). According to the UK's Youth Justice Board of the Ministry of Justice (2021), 15,751 youths were arrested or tried in the past year, with 87% being boys and 13% girls. Among these youths, 70% were White, and 30% were from minority backgrounds. In terms of age, 82% fell within the 15-17 age range, and 18% were aged 10-14. In the

USA alone, over 4,000 youths are arrested daily, often for multiple violent and serious criminal acts, referred to as lifestyle, repeat, or chronic delinquent offenders (Children's Defense Fund, 2019). According to the U.S. Department of Justice, approximately 39% of these arrests are related to property crimes, including burglary, larceny-theft, and motor-vehicle theft. Another 33.4% of youth arrests are for violent crimes such as murder, non-negligent manslaughter, forcible rape, robbery, aggravated assault, arson, and vandalism. The remaining 27.3% involve self-destructive behaviors, including drug and alcohol abuse (Siegel & Office of Justice Programs, 2016).

In Israel, as in other Western countries, youths are involved in a wide range of offenses, similar to those committed by adults, including drug-related, property, violent, sex-related, and cybercrimes. According to Israel's Central Bureau of Statistics, in 2011, there were 11,241 young people aged 12 to 18 with open criminal cases, accounting for approximately 1.2% of the population within this age group. Among these cases, 91.6% involved male offenders and 33% were committed by adolescents from the Israeli Arab population, which makes up about 20.73% of the general population. Notably, over one-third of the Jewish offenders were Jewish immigrants from Ethiopia and the former Soviet Union (The Statistical Abstract of the Israel Police 2019). Ben-Baruch (2013) conducted an analysis of Israeli youth data and found that violent crimes were the most frequent offenses among the youth, followed by self-destructive behaviors and property offenses.

Recent trends in the study of youth criminal behavior have predominantly focused on various risk and protective factors. These studies often delve into specific offenses, such as sex or drug offenses (Brook, Rifenbark, Boulton, Little, & McDonald, 2014; Heffernan & Ward, 2015; Reuven & Turjeman, 2021), or they examine particular aspects of risk characteristics within family, school, or peer contexts (Etzion & Romi, 2015; Telzer, Gonzales, & Fuligni, 2014; Fagan, Van Horn, Hawkins, & Jaki, 2013). Recognizing that criminal behavior is more than the sum of its specific components, our proposed tool seeks to unravel its complexity and multidimensionality. It aims to identify various pathways that may increase or decrease the likelihood of adolescents developing a criminal career.

Adolescents at Risk of Developing a Criminal Career - Phenomenon Definition

Various disciplines in the social and behavioral sciences use the term 'at risk,' and it appears frequently in their literature with varying interpretations (Turjeman & Reuven, 2017). Educators employ the term to describe young people whose academic history includes issues like attendance problems and failing grades, making them susceptible to dropping out of the education system (Stepney, White, Far, & Elias, 2014). Social

workers associate it with individuals experiencing emotional and adjustment problems (Malti & Averdijk, 2017). For doctors and nurses, it relates to individuals facing health problems (Fazel, Reed, Panter-Brick, & Stein, 2012). Despite these diverse definitions, there is a common thread—they all refer to individuals experiencing difficulties and the potential loss of something significant in their lives, whether it's educational opportunities, their social well-being, or even their life itself. Following this logic, in criminology, particularly in the context of youth, 'at risk' refers to children, adolescents, or young adults susceptible to engaging in high-risk behaviors that could hinder their development into productive, responsible, and healthy adults (Young, Greer, & Church, 2017).

While the definitions above seem to be very simple and general, delving deeper into this issue demonstrates two dimensions that make it more complex:

1. **Cause and effect dimension** - All these definitions highlight a problem (cause) that can lead to undesirable outcomes (effect). In criminological literature, this 'problem/cause' is known as a 'risk factor.' Loeber, Farrington, Stouthamer-Loeber, & White (2008) define it as a factor predicting a high likelihood of committing offenses, whether in the general population or among offenders. The resulting 'effect' is invariably negative. Over the past decade, studies have increasingly focused on protective factors and resilience, defined as factors that reduces risks and may lead to positive behavioral outcomes despite exposure to risk factors (Vanderbilt-Adriance & Shaw, 2008).
2. **Acuteness dimension** – This dimension examines the immediacy of risk over time. The literature on risk uses various terms (e.g., vulnerability, danger, hazard, endangerment) somewhat arbitrarily. In reality, these terms should be more precise in expressing different levels of acuteness. This paper proposes a continuum with three levels of acuteness: vulnerability, risk, and danger. In all three levels, youths face the risk of negative future outcomes, such as developing a criminal career, substance addiction, or incarceration. However, the immediacy of the risk and the probability of negative outcomes vary depending on the specific risk and protective factors associated with them.

Looking at the proposed bi-dimensional model implies that each level of risk on the continuum represents a different profile of youth with different characteristics and life history and with unique risk and protective factors (Figure 1).

Risk and Protective Factors - Ecological Model

Contemporary theories of youth delinquency adopt a socio-ecological perspective, which posits that the development of at-risk children is influenced by a combination

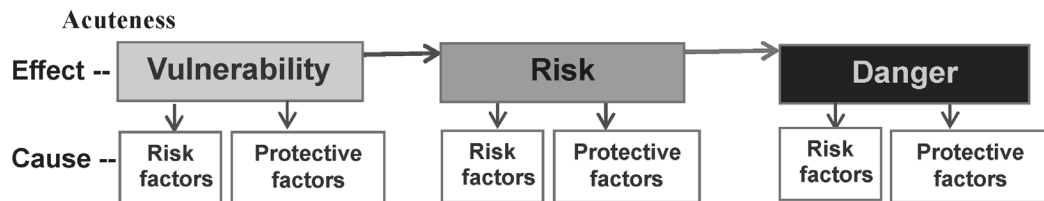


Figure 1: Continuum of Risk of Developing a Criminal Career – Hypothetical Model

of multiple factors. The socio-ecological model highlights the shared responsibility of individuals, families, communities, and society in creating risk situations. Consequently, it often leads to the development of multi-system and more effective coping mechanisms (Reuven & Turjeman, 2018).

Studies investigating the ecological aspect of youth delinquency categorize risk factors into four circles (refer to Figure 2): personal characteristics of children and caretakers (personal), family functioning (family), neighborhood type and characteristics (community), and social features and governmental policy factors (society). This classification underscores the idea that various factors influence children and their susceptibility to delinquency and social misbehavior (Bartlett, Raskin, Kotake, Nearing, & Easterbrooks, 2014).

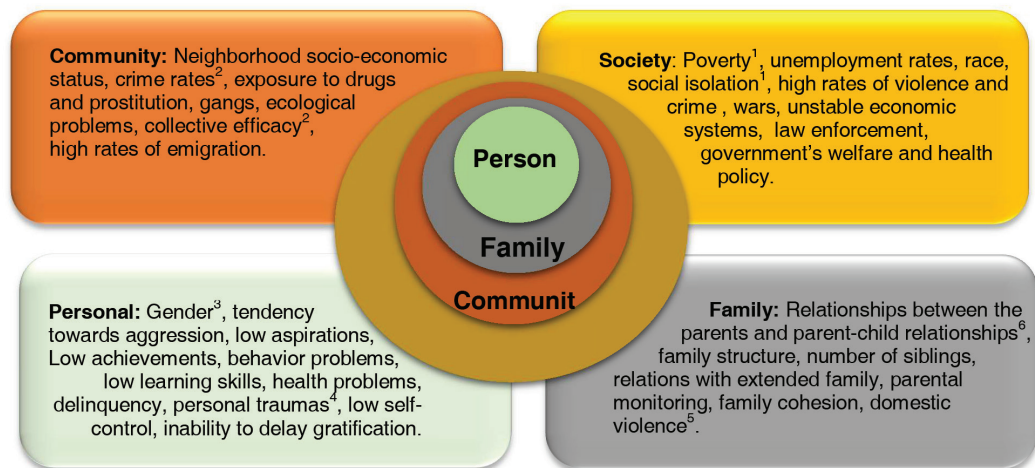


Figure 2: Socio-Ecological perspective of youth delinquency

¹ Abu, Yuval, & Ben-Porat, 2017; Rokven, Weijters, Beerthuisen, & van der Laan, 2018; ² Sampson, Raudenbush, Earls, 1997; Van der Laan, Rokven, Weijters & Beerthuisen, 2021; ³Quinn, 2015; Watts, 2018; ⁴ Vinish & Prasad, 2018; ⁵ Reuven & Turjeman, 2021; ⁶ Bartlett, Raskin, Kotake, Nearing, & Easterbrooks, 2014.

Figure 2 emphasizes risk factors within an ecological model. It's important to note that while risks are significant, they alone do not guarantee delinquency but instead act as warning signals. In contemporary research, there is ample evidence of children growing up in risky environments without becoming offenders. Therefore, risk factors do not inevitably lead to negative outcomes. Current research trends in this area center on the concepts of competence and resilience, which are viewed as sources of various protective factors that act as a buffer against delinquency.

Competence is defined as the ability to adapt appropriately to the social environment. It is primarily assessed by measuring success in developmental tasks that align with children's age and gender at a given time, and in accordance with cultural and societal expectations. Children living along the continuum of delinquency risk often reside in environments that lack the necessary stimuli and opportunities to foster age-appropriate competence. However, among these children are those with high levels of resilience, which empowers them to surmount barriers and develop competently despite their challenging circumstances.

Resilience is a mechanism encompassing a range of protective factors within the child, family, and community domains. These factors are associated with positive adaptation even in the presence of risk factors (Vanderbilt-Adriance & Shaw, 2008). Resilience is recognized as a dynamic process arising from continuous interaction and negotiation between an individual and their environment, rather than being an inherent, internal characteristic of the person (Luthar 2006).

Recent Research Trends

The discussion of different types of risk factors has gained prominence in developmental and life course criminology research. This field focuses on the development of offending and antisocial behavior, risk factors across various ages, and the impact of life events on the course of development (Farrington, 2003). Studies conducted over the past two decades, explored large amount of risk and protective factors that were classified in different manners (for examples see Heffernan & Ward, 2015; Loeber, Farrington, Stouthamer-Loeber & White, 2008). Farrington & Loeber (2012) argued that risk factors and protective factors are independent and have their own significance, and these variables have been discussed within the context of recidivism (Hockenberry, 2020), chronic offenders (Loeber & Ahonen, 2014), and desistance (Capaldi, Kerr, Eddy, & Tiberio, 2015).

The most extensively studied risk factor is the age of offenders, with the majority of studies focusing on the crime-age curve and explicitly exploring various trajectories of crime across different age groups. These studies have revealed that the peak age of onset occurs between 8 and 14 (DeLisi, Neppl, Lohman, Vaughn, & Shook, 2013), with

the highest prevalence of offending during late adolescence, typically between the ages of 15 and 19 (Loeber & Farrington, 2012). Moreover, the peak age for desistance is typically observed between 20 and 29 (Farrington, Ttofi, Crago, & Coid, 2014). Building upon these findings and others, Sampson & Laub (2005) formulated an age-graded theory that underscores the strong continuity in antisocial behavior across various life domains, from childhood through adulthood.

Other extensively studied factors include family, school, and peer influences (for examples, see Telzer, Gonzales, & Fuligni, 2014; Fagan, Van Horn, Hawkins, & Jaki, 2013). The common thread among these variables, despite their varying contexts, is their relationship to one key factor: social control. Numerous studies have consistently identified parental supervision and parental attachment as major family-related factors (Fagan, Van Horn, Hawkins, & Jaki, 2013). The school context is often linked to school attachment (Hirschi, 1969), and attachment to delinquent peers has shown a significant positive impact on delinquency, independent of family and school processes (Sampson & Laub, 2005). Gender, along with other socio-demographic variables, has also been found to correlate with delinquent behavior. However, results across studies are inconsistent (Klein & Maxson, 2006), and today, these factors are mostly considered as mediating or intervening risk factors (Hirschi, 1969; Sampson & Laub, 2005).

Studies have identified three categories of protective factors that, by definition, moderate the association between risk factors and their outcomes (Reuven & Turjeman, 2018). The first category is Individual Characteristics, which encompass attributes like high intelligence, emotion regulation, a resilient temperament, and locus of control. The second group includes social and family protective factors, such as warm, affective relationships and a commitment to conventional lines of action. This category also encompasses the presence of a caregiver who can provide both material resources and more abstract resources. The third category comprises community-level protective factors, which encompass factors like neighborhood quality, neighborhood cohesion, and the presence of youth community organizations, among others.

Protective factors are often discussed in the context of desistance. Researchers like Sampson & Laub (2006) and Moffit (1993) have found that successful cessation of criminal behavior occurs when the immediate causes of crime are disrupted. They describe this process as ‘knifing off’ individual offenders from their immediate environment and providing them with a new script for the future. According to their theory, youths who desist from crime often have a daily routine that offers structure and meaningful activities. Empirical evidence suggests that institutions such as the military and reform schools have the potential to ‘knife off’ individuals from a life of crime (Lee & Villagrana, 2015). However, despite numerous studies examining risk and protective factors as predictors of criminal behavior or desistance, only a few have explored these

factors among adjudicated youth in correctional institutions (Lee & Villagrana, 2015). The limited studies that focused on this population often examined specific types of risk factors, such as school-related factors (Crooks, Scott, Wolfe, Chiodo, & Killip, 2007), psychopathy (Stickle, Marini, & Thomas, 2012), behaviors like substance abuse (Widom, Schuck, & White, 2006), or gang membership (Dmitrieva, Gibson, Steinberg, Piquero, & Fagan, 2014). Additionally, many of these studies used relatively small sample sizes (Day, Nielsen, Ward, Sun, Rosenthal, Duchesne, Duchesne, Bevc, & Rossman, 2012).

In one of the largest studies of adjudicated youth, conducted by Lee & Villagrana (2015), the distinction between youths in child welfare and those involved in juvenile justice systems was emphasized. They noted the challenge of determining how many youths in the child welfare system ‘crossed over’ into the juvenile justice system, but it was observed to be a frequent occurrence. The study by Lee & Villagrana revealed that crossover youths engaged in delinquency at a younger age and were more likely to recidivate compared to non-adjudicated youth. Specifically, the study identified factors related to substance use, education, and peer associations as meaningful predictors of the risk of recidivism for adjudicated youth. In contrast, among non-adjudicated youth, only factors related to education were found to predict a similar risk (Lee & Villagrana, 2015).

In Israel, there is a concerning increase in personal, family, social, and cultural deficits. Over the years, these deficits have gained significance and now serve as risk factors for young offenders. They are associated with issues like ADHD, involvement in gangs, emotional distress, and loitering. Caretakers within the Education and Welfare authorities often find existing intervention methods frustrating. Additionally, the lack of cooperation between the young offenders and their primary caregivers contributes to the offenders’ limited sense of responsibility for their actions and a lack of essential feedback. Consequently, this situation leads to a deterioration in the behavior of young offenders and an increased tendency toward recidivism (Cahan-Strabchenski & Levi, 2011).

The Objectives of the Actuarial Tool and Expected Contribution

The objectives of the structured tool proposed here are twofold: first, to identify various levels of risk among ‘at-risk’ youths, and second, to explore the potential interaction between risk and protective factors that both generate and mitigate this risk. The proposed tool is designed to delve into the complexity of both risk and protective factors on the continuum of risk, and to draw the adolescents’ potential criminal path with a focus on their social and cultural features. As discussed earlier, risk behaviors can result in minor or major, short-term or long-term consequences. The primary aim of this tool is to establish the validity of a risk continuum by constructing a profile

that encapsulates the cumulative life experiences associated with each level of risk. To achieve this, the specific objectives of this tool are as follows:

- (a) Emphasis on the cultural, psychosocial, and subjective aspects of risk impact.
- (b) A criminological analysis of adolescent criminal behavior patterns, with a focus on delinquency and victimization as risk outcomes resulting from specific combinations of risk and protective factors. By tracing the early stages of our respondents' life journeys, we aim to identify the critical characteristics and events that may have influenced their risk profiles.
- (c) An empirical examination of the theoretical proposition of bi-dimensional model of risk (refer to Figure 1) in the context of a wider ecological field (refer to Figure 2).

Description of the Assessment Tool

Building upon the theoretical model that conceptualizes the youth risk context, we developed scales to gauge the severity of risk. These scales deliberately avoided the use of the ambiguous term 'risk.' Instead, they primarily focused on actual or potential risk indicators rather than their attributed causes. Each scale comprised between three and five levels, spanning from 'very low' to progressively higher degrees within a specific dimension. Importantly, every level on a scale had a clear and explicit definition. The narrative descriptors for each level were formulated to be as observable as possible and designed to be mutually exclusive.

The diagnostic tool consisted of two parts designed to facilitate risk assessment. The first part encompassed indicators for evaluating teenagers' resilience. This section comprised 25 scales, each associated with one or more protective factors relevant to personal, interpersonal, family, or community aspects of youth (refer to Table 1). All resilience scales utilized a five-level rating system, with 1 denoting a low level of a factor, 3 indicating an intermediate level, and 5 signifying a high level.

The second part comprised indicators for the assessing teenagers' risk. This section included 38 scales, each corresponding to one of seven dimensions of risk (refer to Table 2). Within each of the 38 scales, four measures were considered. The first two measures pertained to the risky behavior: (1) Frequency of the behavior: This was rated on a five-level scale, with 1 indicating noninvolvement and 5 indicating a high level of engagement in the risky behavior. (2) Severity score of the risky behavior: This was rated on a three-level scale, with 3 denoting low severity and 5 representing high severity of the risky behavior. The remaining two measures evaluated the influence of family and peers on the teenagers concerning each behavior. Both measures used a

Table 1: Four Dimensions of Resilience and their Related Scale Measures

	<i>Personal scales</i>	<i>Interpersonal scales</i>	<i>Family related scales</i>	<i>Community related scales</i>
1	Self-efficacy	Sociability	Family relationships	Neighborhoods' ecological status
2	Self-image	Significant other	Parental acceptance and affection	Neighborhoods' crime events
3	Locus of control	Charisma	Child-parent interactions	Community solidarity
4	Mental flexibility	Verbal abilities	Parental authority	
5	Emotional intelligence	Abilities to get help	Parental monitoring	
6	Intellectual curiosity		Parental involvement in school	
7	Resourcefulness		Treatment of disabilities	
8	Inner voice			
9	Personal skills			
10	Delayed gratification			

three-level scale, with 3 representing a potential protective effect and 5 indicating a potential promotive effect on the risky behavior.

By summing all four measures, grades were assigned to each scale, ranging from 1 (indicating no risk) to 20 (indicating a very high risk). This score not only reflected the severity of the behavior itself but was also sensitive to the impact of peers and family, who played a crucial role in teenagers' risk profiles. The last three measures (severity, family and peer impact) were completed exclusively for cases that received a grade between 3 and 5 in the frequency measure.

In summary, the present diagnostic tool offered objective criteria for assessing the risk and resilience of teenagers, encompassing the comprehensive definition of the phenomenon. This assessment tool provided a ranking of risk severity across various levels and dimensions. The measurement of risk severity along the continuum typically mirrored the adolescents' circumstances and was directly linked to their potential strategies for dealing with the risks they encountered.

Scoring

A rating form has been designed to facilitate completing the scales of a case. These scale ratings were used to compute individual seriousness scale scores. There are several ways of forming composite scores for the assessment of risk. Two of them were considered for the validation and use of the assessment tool. The first was the factor-scoring of the scales. Factor analysis was performed in order to validate the assessment tool (results

Table 2: Seven Dimensions of Risk and their Related Scale Measures¹

	<i>Dropout scales</i>	<i>Violence scales</i>	<i>Substance use scales</i>	<i>Sexual behavior scales</i>	<i>Delinquency scales</i>	<i>Victimization scales</i>	<i>Self-harm scales</i>
1	School absence (3)	Bullying (2)	Legal substance abuse (4)	Pornography consumption	Vandalism	Property offence victimization	Piercing & tattoos
2	School functioning (4)	Violent behavior (3)	Illegal substance abuse (2)	Sexual permissive behavior	Theft	Bullying offence victimization	Eating disorders
3	Escape tendencies (2)	Carrying a weapon (2)		Sexual relations	Driving offences (2)	Violent offence victimization	Suicidal behavior (2)
4					Trespassing	Sexual offence victimization	

¹ the number in brackets near some of the scales represent the number of subscales composing it. Scales with no brackets do not have subscales.

are presented in the next section). After validated, a composite score may be computed based on the results of the factor analysis at three levels: (1) a total factor-score which gives the whole assessment of the teenager's risk (one score), a separate score for risk and resilience of the teenager (two scores), and a separate score for each component of risk and resilience (4 scores of resilience and 8 scores of risks). The scores facilitate the comparison of the seriousness of risky behaviors, combined with the teenagers' focal strengths described on different scales. Breaking the total score into more specific components of risk, enables the youth workers to build a tailor-made intervention program for the teenagers according to their strength and weaknesses. Moreover, utilizing the total score enables the youth workers to monitor the results.

Administration

The scales are designed to be completed by a service provider, usually a social worker, a teacher or youth worker, based on all credible information available about the teenagers under the service providers' supervision. Accurate completion requires a direct contact with the teenagers who are assessed and the person completing the assessment must obtain and synthesize information from several sources (the teenagers themselves, their parents, their teachers etc.).

Validity and Reliability

The research population for the validation study consisted of a subsample of 240 boys and girls aged 12 to 18, who were participants in a broader study focused on evaluating

intervention programs for at-risk youths. To conduct the validation analysis, we established a quota sampling method for youths from two distinct types of informal youth institutions. Specifically, we sampled 120 youths from youth movements or community center activities, as their characteristics were expected to place them on the normative end of the scale. Additionally, another 120 youths were sampled from youth centers, typically serving as an informal framework for at-risk youths.

We initiated our analysis by validating the four dimensions of resilience. We conducted a maximum likelihood confirmatory factor analysis with varimax rotation to examine whether four factors underpinned the theoretical structure of the scales. The findings affirmed the initial structure, revealing four factors with eigenvalues exceeding one and collectively accounting for at least 42 percent of the total variance.

All loadings were reasonably large and consistent in pattern and direction. Table 3 presents the four factors of resilience with item loadings and their reliabilities. Internal consistency of the subscales was estimated by calculating Cronbach’s alpha. Reliabilities ranged from .750 to .932. These data indicated that the four dimensions had satisfactory internal consistency reliability and, therefore, all items were retained in the scale. The items allocated to each of the factors distinctly formed four clusters, each comprising protective factors of a similar nature. Consequently, we were able to derive four resilience dimensions that exhibited internal homogeneity in their contents.

Table 3: Dimensions, Validity, and Reliability Scores for the Resilience Part of the Assessment Tool

<i>Dimension</i>	<i>Number of scales</i>	<i>Minimal loading</i>	<i>Maximal loading</i>	<i>Eigenvalue</i>	<i>Cumulative variance</i>	<i>Cronbach's alpha</i>
Personal scales	10	.471	.797	3.966	39.664	.825
Interpersonal scales	5	.629	.784	2.523	50.468	.750
Family related scales	7	.749	.851	4.489	64.132	.932
Community relates scales	3	.618	.903	1.952	65.062	.734

Subsequently, we proceeded with the analysis to validate the seven dimensions of risk. Employing the same analytical approach, we conducted a maximum likelihood confirmatory factor analysis with varimax rotation to investigate whether seven factors underlay the theoretical structure of the risk scales. The findings validated the initial structure. Table 4 displays the validity and internal reliability scores. As anticipated, seven factors with eigenvalues exceeding one and collectively explaining at least 42 percent of the total variance were extracted.

Here, most of the loadings were reasonably large and consistent in pattern and direction. Table 3 presented the final seven factors with the final number of scales entered to each dimension, item loadings and their reliabilities. Internal consistency

of the subscales was estimated by calculating Cronbach's alpha. Reliabilities ranged from .713 to .871. The data indicated that each of the seven dimensions of risk had satisfactory internal consistency reliability. The items assigned to each of the factors were found to clearly form the expected seven clusters, each consisting of risk factor of a similar nature.

Table 4: Dimensions, Validity, and Reliability Scores for the Risk Part of the Assessment Tool

<i>Dimension</i>	<i>Number of scales</i>	<i>Minimal loading</i>	<i>Maximal loading</i>	<i>Eigenvalue</i>	<i>Cumulative variance</i>	<i>Cronbach's alpha</i>
Dropout scales	9	.493	.828	4.387	48.750	.871
Violence scales	5	.531	.904	4.010	57.493	.868
Substance use scales	6	.688	.782	3.207	53.450	.778
Sexual behavior scales	3	.809	.843	2.066	68.879	.813
Delinquency scales	4	.539	.915	2.670	66.762	.782
Victimization scales	4	.446	.858	2.324	58.095	.713
Self-harm scales	4	.754	.874	2.608	65.205	.850

In the final stage of the analysis, we conducted a comparison of the composite scores for each resilience and risk dimension between the two groups of youths, namely those classified as 'at risk' and those categorized as normative. The aim of this comparison was to assess the tool's capability to differentiate the severity of risk and distinguish between normative and at-risk youths. The results of these comparisons are presented in Table 5. As indicated in the table, normative youths received higher scores on the four resilience dimensions when compared to 'at-risk' youths, while 'at-risk' youths scored higher on the seven risk dimensions. All of these differences were statistically significant.

Table 5: Resilience and Risk Composite Scores of Normative and 'at risk' Youths

	<i>At risk youth scores</i>	<i>Normative youth scores</i>	<i>t</i>
Personal scales	-.220 (.612)	.278 (.874)	4.548***
Interpersonal scales	-.188 (.660)	.237 (.851)	3.862***
Family related scales	-.553 (.925)	.697 (.514)	11.365***
Community relates scales	-.365 (.973)	.461 (.796)	6.443***
Dropout scales	.574 (.916)	-.724 (.475)	-12.906***
Violence scales	.370 (1.112)	-.467 (.327)	-7.536***
Substance use scales	.342 (1.130)	-.431 (.430)	-6.630***
Sexual behavior scales	.290 (1.101)	-.366 (.445)	-6.115***
Delinquency scales	.402 (1.073)	-.507 (.134)	-8.838***
Victimization scales	.356 (1.021)	-.449 (.378)	-7.676***
Self-harm scales	.233 (1.132)	-.293 (.389)	-4.572***

Expected Contribution

This structured tool was developed with a focus on adjudicated youth to assess and validate a continuum of risk. While much research has examined each of the factors mentioned above, most studies have described these factors individually, with only a few exploring possible interactions among them. Given the complex nature of juvenile offenders and their specific yet unknown rehabilitation needs, a more in-depth study was necessary to address their high recidivism rates (Barton, 2006). Given that risky behavior among adolescents is a universal phenomenon, this tool is expected to contribute significantly to our understanding of the complexity of risk and protective factors and their implications in terms of risk outcomes. Additionally, it offers a fresh perspective on researching criminal trajectories among at-risk adolescents.

The tool's expected contribution include:

- (a) Gaining deeper insights into criminal careers, including their origins, and the ability to identify factors that encourage or deter the development of criminal careers.
- (b) Contributing to our understanding of how risk and protective factors affect the risk status of adolescents. The opportunity to gather information from legal, social, and psycho-diagnostic records will enhance our comprehension of the transitional phase from childhood to adolescence among delinquent youths.
- (c) Expanding the criminological discourse on at-risk youths and behaviors beyond its general scope to encompass discussions about various possible profiles characterizing different cultural groups.
- (d) Quantifying the different levels of risk and their relationship with their underlying causes can serve as a valuable tool for planning interventions and policy development. This study will facilitate improved prognoses for youths in correctional institutions, resulting in better alignment of rehabilitative or punitive intervention programs with their specific risk profiles.
- (e) Providing data-driven insights that can lead to more informed and effective decision-making. It can assist in identifying individuals who are at a higher risk of engaging in criminal behavior, allowing for targeted interventions.

In summary, this actuarial tool is designed to assess risk, make predictions, and optimize decision-making processes. Its contribution include improved decision-making, risk mitigation, cost savings, fairness, continuous improvement, and accountability when used appropriately and ethically.

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