

# The case for a fifth-generation risk assessment in correctional settings

Yilma Woldgabreal

*Flinders University; Adelaide, Australia*

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## Abstract

Risk assessment instruments are widely used and guide critical decisions in correctional settings, including clinical formulation, treatment provision, security classification within prisons, release plan, and supervision conditions in the community. These instruments have undergone four generations of revisions and improvements, each marked by distinct assumptions and paradigm shifts. However, despite emerging evidence indicating weak cross-cultural predictive accuracy and construct validity issues, the field of risk assessment appears stagnant for decades. This article discusses the need for a fifth-generation risk assessment that incorporates new research findings and adapts to the cultural nuances of correctional practices.

**Keywords:** risk assessment, corrections, justice-involved minorized groups, predictive validity, construct validity

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## Introduction

Risk assessment instruments in the corrections field have evolved over four generations from discretionary professional judgment to actuarial models and data-driven evidence-based approaches (Andrews et al., 2010). Yet, generalisability of these instruments remains a significant challenge, primarily due to low predictive accuracy and construct validity issues when applied to justice-involved people of color or indigenous background (i.e., minorized groups) in the western countries. The empirical evidence has consistently shown that current risk assessment instruments overpredict risk for minorized groups (Woldgabreal et al., 2022; Ziersch et al., 2025), resulting in disproportionate consequences such as heightened surveillance and lengthy criminal justice sanctions, which undermine fairness and erode trust in the system.

The discourse surrounding risk assessment instruments, in particular the idea of moving away from “one-size-fits-all” approaches to culturally specific and sensitive approaches, is not easy or simple. It is a delicate and contested environment that requires careful navigation of bias and power dynamics. Nonetheless, the importance of having reliable and consistent risk assessment instruments in correctional settings is simply a necessity rather than a choice. Therefore, this article begins by describing the historical development of risk assessment instruments, including a critical evaluation of their limitations and the need for developing a fifth-generation risk assessment that aims to address issues related to predictive accuracy and construct validity within a cross-cultural framework.

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Corresponding Author: Dr. Yilma Woldgabreal [yilma.woldgabreal@flinders.edu.au](mailto:yilma.woldgabreal@flinders.edu.au)

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### **The first-generation risk assessment**

The first-generation risk assessment, which emerged in the 1920s, was based on correctional practitioners' professional judgement, hunches, and information gathered from justice-involved individuals to assess risk of recidivism (Bonta & Andrews 2006). In the wake of the "nothing works" campaign against correctional rehabilitation during the 1960s (Martinson, 1974), this approach was heavily criticized for being subjective, unstructured, and unreliable. Many described this period as one of the critical turning points in the history of correctional rehabilitation in most western countries such as the United States, the United Kingdom, and Canada (Farrall & Jennings, 2012; Garland, 2001; Taxman, 2002). It was noted that governments during this era began to adopt the "get tough on crime" stance or implementation of policies and practices that encouraged mass incarceration and increased surveillance systems such as home detention, shifting the focus away from professional judgment in assessing risk of recidivism and rehabilitation to restrictive and punitive criminal justice sanctions.

### **The second-generation risk assessment**

The second-generation risk assessment, which was a quantified actuarial instrument, emerged in the 1970s. An example was the Salient Factor Score (SFS) in the United States (Hoffman & Beck, 1978), which was used to predict a prisoner's likelihood of re-offending following release from prison. The SFS was initially composed of seven static risk indicators such as number of prior criminal convictions, age at the time of the offense, prior breach of parole, and history of substance misuse. Each item was assigned a numerical value ranging from zero to three, with a higher total score indicating risk of recidivism. The score was then used as an objective or evidence-based measure to make release decisions and impose restrictive post release supervision conditions in the community.

Compared to the first-generation professional judgment, studies found that the SFS and other similar actuarial risk assessments provided consistency, reliability, and structured approach to risk classification (e.g., Andrews et al., 2006). However, these tools had (and continue to have) significant limitations because of their focus on historical and static information, restricting their ability to assess, formulate, and treat offense-related behaviors that were amenable for change and successful reintegration into the community. Moreover, actuarial tools were (and still are) considered atheoretical, as items were chosen based on historical data showing a correlation with recidivism rather than being grounded in theoretical relevance (Hogan, 2020).

### **The third-generation risk assessment**

The third-generation risk assessment instruments represented a hybrid model of actuarial measures and "criminogenic needs" or factors that were considered dynamic and changeable through intervention such as criminal attitudes, criminal peers, strained family relationships, and substance use. Examples of these instruments included the Level of Service Inventory-Revised (LSI-R; Andrews & Bonta, 1995), and the Historical-Clinical-Risk Management-20 (HCR-20; Webster et al., 1997). These instruments enabled correctional practitioners in targeting specific needs for interventions and tailoring individualized case management to reduced risk of recidivism.

Although the third-generation risk assessment instruments were considered more comprehensive compared to the second-generation, concerns were still raised about potential biases due to the subjective nature of assigning scores to some of the dynamic risk items such as criminal attitudes and the role of peer influences on offending behavior (Byrne & Pattavina, 2017). In other words, interpretation of such risk factors can differ depending on context, perspective or worldview of the assessing correctional practitioner. Another criticism of the third-generation instruments related to conceptual and predictive validity issues (Austin, 2006; Hess & Turner, 2017). Across these studies, only a few variables (e.g., ten of the 54 items on the LSI-R) demonstrated predictive value and utility for accurate risk classification, and therefore, raising the question about the merit for including more variables that do not improve predictive accuracy. Desmarais and Singh (2013) attributed this largely to the observation that many of these instruments were validated by their developers and demonstrated lower predictive accuracy when subjected to independent evaluation.

### The fourth-generation risk assessment

The fourth-generation risk assessment instruments have been in use since the 1990s. A notable improvement has been the addition of “responsivity factors”, where correctional practitioners make structured professional judgments and consider motivation, learning styles, abilities, strengths, personality traits, and other personal characteristics of justice-involved individuals. Examples of the fourth-generation instruments include the Level of Service Case Management Inventory’s (LS/CMI; Andrews et al., 2010), the Correctional Offender Management Profile for Alternative Sanctions (COMPAS; Brennan & Oliver, 2000), and Violence Risk Scale (Wong & Gordon, 2006). The risk-need-responsivity principles that underpin these instruments focus on integrating assessment outcomes with treatment and case management plans. At the core of this approach and indeed that of the third-generation instruments is a positivist paradigm or an epistemological tradition that encourages prediction and quantification of risk factors as objective facts (Kemshall, 2003). The assumption is that data driven risk assessment is superior, less susceptible to human biases, and better for allocating services to justice-involved individuals. In other words, these assessment instruments are used to prioritize treatment to those who are at a high risk of recidivism (*risk principle*), focus on offense-related behaviors (*need principle*), and tailor treatment according to the learning style, motivation, and ability of the individual participant (*responsivity principle*) (Bonta & Andrews, 2010).

Although developers and proponents of these assessment instruments continue to advocate for a universal application (e.g., Andrews & Bonta, 1995; Gutierrez et al., 2013; Olver et al., 2022; Quinsey et al., 2006; Wilson & Gutierrez, 2014), this claim has been contested by both mainstream and minority researchers. The essence of this contest is based on the growing empirical evidence that these instruments function differently for different groups of people, often inflating the risk status of justice-involved minorized groups compared to their White counterparts (e.g., Day et al., 2018; Day et al., 2023; Hart, 2016; Shepherd & Lewis-Fernandez, 2016; Ugwudike, 2020; Woldgabreal et al., 2020; Woldgabreal et al., 2022; Ziersch et al., 2025). This difference occurs largely because the current risk assessments do not commonly account for the historical, social, economic, and political disadvantages facing justice-involved minorized groups.

Therefore, biases inherent in risk assessment instruments should come as no surprise when many of the risk indicators underpin structural inequalities, systemic discrimination, and have largely remained anglophonic in their epistemic values and neglected the specific historical contexts, disadvantages and concerns of minorized groups in the western nations (e.g., Gillies, 2013; Klingele, 2020). To provide more context, it is useful to consider some of the current risk assessment metrics and how they illuminate the need for action. Risk assessment instruments share common factors, usually known as the ‘central eight’ predictors of recidivism – criminal history, antisocial personality patterns, antisocial cognition, antisocial associates, substance abuse, unemployment, family problems, and low engagement in leisure or recreational activities (Andrews & Bonta, 2010). Take, for example, the ‘criminal history’ factor. Experiences and differential treatments of minorized groups have been well-established, including racial profiling, over-policing, unlawful stops, searches, higher rates of rearrests, criminal charges, and convictions compared to those from mainstream populations (e.g., Delsol & Shiner, 2015; Mears et al., 2016; Sommers & Marotta, 2014). Disadvantages and selective targeting such as these are embedded in the existing risk assessment algorithms and contribute to the overrepresentation of minorized groups in the criminal justice system in most western countries. Thus, the question here is whether we are predicting criminal justice agents’ behavior or the would-be offender or both? In this case, the assumption of “criminal history” as a predictor of recidivism or criminal behavior is problematic.

Let us also consider “antisocial attitudes” in the context of colonial legacies. Minorized groups have historically experienced considerable injustices with forced relocation, slavery, dispossessions, discrimination, and other ill-treatments. It should, thus, come as no surprise again that justice involved minorized group tend to mistrust and have unfavourable views of the criminal justice system (e.g., Gramlich, 2019). The question then becomes: How would one expect minorized groups to not hold attitudes that condemn systemic disadvantages? And when they do, why would we interpret their

views as a justification of wrongdoing and consequently rate them high on the “antisocial attitudes” or “cognitive distortions” risk indicator? Yet, another example is “unemployment” as a major risk predictor of recidivism. Is the labor market really a level playing field? The reality is that, let alone those with criminal justice involvement, many people of minoritized background without criminal record will experience considerable equity and inclusion issues in the labor market. Unemployment is an indicator of structural disadvantages, rather than criminality. It is also worth noting that only a very small proportion of unemployed people commit offenses. The overall concern here is that the assumption of the universality of risk factors potentially leads practitioners to a conclusion that justice-involved minoritized groups are more aetiologically predisposed to criminality.

### **The case for a fifth-generation risk assessment**

The evidence clearly shows that current risk assessment instruments are open for discretionary decision making, fail to provide the intended objectivity, inherently legitimise the criminal justice system’s structural racism, and contribute to the increasing overrepresentation of minoritized groups in the criminal justice system. This is because that these instruments have historically been influenced (sometimes unwittingly) by values, worldviews, beliefs, and perceptions of the dominant culture in western societies, making them ill-suited to achieving unbiased outcomes for minoritized justice-involved people (Woldgabreal, 2023). Therefore, there is ample justification for an urgent epistemic reform (Green, 2020), and while doing so the need to “decolonise” westernised ideas of knowledge and knowledge production by reconceptualizing knowledge as fluid, contextual, dynamic, and organic (Gillies, 2013; Tauri, 2017; Teo, 2015).

Our next question is: what steps will move us forward to develop a fifth-generation risk assessment? The goal is to ensure that risk assessment instruments do not function differently and that they demonstrate predictive accuracy and construct validity within a cross-cultural framework. Our research methodologies should recognize diverse perspectives and knowledge as legitimate epistemic resources and should be part of the evidence-based correctional policies and programs (Keikelame & Schwartz, 2019). For this, genuine partnerships among key stakeholders, including scholars with cultural authority, relevant government and non-government institutions, and researchers are considered critical. This will diversify our assessment practices and bridge the gap in equity and fairness (Woldgabreal, 2023).

However, it is important to recognize the challenges involved, particularly resistance to a paradigm shift that has underpinned decades of stagnation in correctional risk assessment practices. We have seen increasing emotional and reputational attachment to “one-size-fits-all” approaches, despite predictive accuracy and construct validity issues of these assessments when applied to minoritized justice-involved people. We need to develop instruments that do not function differentially across populations. For this, criminal justice agencies, practitioners, and researchers should invest their energy and resources in the development of cross-culturally valid instruments rather than dismissing or discounting this need and minimizing the ongoing detrimental effects of current approaches on minoritized justice-involved people. This would live up to evidence-based practice. The question of how is also critical and requires genuine commitment to a research program that can examine, develop, and implement alternative approaches. It is important to note that current risk assessment instruments have been given ample opportunities to be examined, refined, and improved over the past several decades. The same principle should apply to the development of cross-culturally valid instruments, which are currently in their conceptual stage. It is, thus, imperative for all of us with vested interest in the field of corrections to avoid falling into the trap of maintaining the status quo for a universal approach or engage in temporary or minor fixes in the hope that concerns raised about current risk assessment instruments would simply go away (Woldgabreal, 2023).

In the meantime, correctional agencies cannot simply sit back and wait for a cross-culturally valid instrument to evolve. This is rather a long-term outcome. We need short- and medium-term plans to minimize the differential impact of current risk assessment instruments on minoritized justice-involved people such as security classification, community-based supervision, technical violation outcomes, participation in rehabilitation programs, and conditional release. Useful strategies for this include

strengthening cross-cultural competence through regular supervision, reflective practice sessions, and targeted training to ensure that practitioners are well informed of the limitation of current risk assessment instruments and key ethical considerations when engaging in the assessment process (Woldgabreal, 2023). Such proactive approaches can create a solid foundation and provide critical insights for the development of a culturally tailored fifth-generation risk assessment in the long term.

## Conclusion

Risk assessments have evolved over many decades, beginning from the first-generation professional judgment before the 1970s to the current fourth-generation instrument such as the Level of Service/Case Management Inventory (LS/CMI; Andrews et al., 2010) and Violence Risk Scale (Wong & Gordon, 2006). These instruments function differentially across cultural groups, often resulting in significantly higher scores when applied to minoritized groups. Biases inherent in these instruments contribute to decisions that disproportionately place minoritized groups into segregation, restrictive prison conditions, referral to inappropriate treatment pathways, delayed conditional release, more intensive supervision requirements and technical violation outcomes in the community, and ultimately their overrepresentation in the criminal justice system.

These issues remain pervasive and speak to the extent to which we, as criminal justice practitioners and researchers, have chosen to overlook the macro level racial and ethnic disparities across criminal justice practices. Therefore, the need for a fifth-generation risk assessment instrument, with specific focus on predictive accuracy and construct validity, is well overdue. Taking the next step requires interprofessional, intercultural, and multisystemic collaborations with a view to delivering better and effective criminal justice outcomes for all.

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